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VOLUME 2

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CASSANDRA

By JOHN K. AIKEN

The sequel to "Dragon's Teeth," which continues the story of the inhabitants of Alpha Centauri IV in their one-sided fight against the might of the Galnos

Illustrated by TURNER

I

SNOW sat alone in a dusk-shadowed room, gazing blankly at the twilit landscape. His shoulders were bowed, and six months had brought new lines and a new haggardness to his face; the face, now, of a philosopher plunged into a world of nightmare action.

He was thinking of twilight. The twilight of barbarism which was sifting down over the Galaxy: momentarily relieved by the brief twinkle of such exploits as their own of the previous summer—but only momentarily, for soon, he felt, the Galnos would return, brutally to avenge their setback and perhaps in doing so to seal the fate of humanity.

And, too, the sharp black agony of the never long-absent thought stabbed him once again: Vara, his lovely Vara, the lifelong companion whose grave humour and placid wisdom had so often helped him; Vara laid low by a problem for her insoluble. So quiet and pale she had become after Elm's death and the destruction of the Galno fleet, withdrawing even from him, for she insisted that the responsibility for both was hers. And finally she had sunk into a mindless coma, beyond all their skill to cure, from which death might be the gentlest release.

Unconsciously, as often in times of trouble, he moved to the neochord—not his own beloved instrument, but loaned as was the villa, now half hospital, in which he lived. But he checked the impulse as soon as he became conscious of it, for music itself had failed him, had become an empty pleasantry on a cosmic tragedy.

A quick step on the terrace, and Anstar came in. His expression was firmer, more responsible, now; he was frowning.

"Snow," he said at once, "quickly—I want you to come with me to the marshes before it gets dark. It's old Erasmus—he's dying, and there's something important he wants to tell both of us."

"You go, Anstar," Snow said with a weary hopelessness. "Tell him I'm ill or something. I wouldn't be any use."

"No. He insists on us both. He wouldn't tell me alone. And it'll be good for you—you've been here, brooding, too much. And remember, we're still in the middle of a struggle for survival."

"A completely desperate one. All we did last summer was to give ourselves an extra year of misery and apprehension, no time for anything that



matters," Snow said bitterly. "Even granting that we have decided to continue resistance, what has Erasmus to do with it, what help can he be? Go, Anstar, and leave me here—I'm just a hulk—without her."

"Come, old friend." Anstar put a hand on Snow's shoulder, reproaching himself with having done too little, amid the bustle of defence measures, to rouse him from his apathy. "She's no worse to-day. Perhaps she's reached the turn of the tide, perhaps her mind has had the rest it needed. And Fairleth and Amber are doing all that can be done."

Somehow, by sheer force of will, he had got Snow to his feet and walking uncertainly out onto the terrace; he went on talking urgently. "I'm sure Erasmus has something really important to say, but you know how mysterious he's always been. Remember those queer stories he used to tell us when we were kids, about when he was young—he made it seem a vast time ago—and played with some kind of animals, or was brought up by them, or something? I don't even know if it happened here, but anyway, this message of his is something to do with all that . . . I hope we get there in time."

Snow stumbled, and Anstar's grip on his arm tightened. He spoke dully. "You're only trying to interest me in elaborations. But it's no use. You know as well as I do that the position's brutally simple. It's virtually certain that the Galnos have analysed our weapon. The Snowbeam, as

everyone insists on calling it—if they know how I hated it now! And when the attack comes they'll be armed against it, either by shielding their atomite or by using some other source of power and explosive. And may that be soon."

Anstar did not answer. He was shocked by the cold revelation of Snow's state of mind, and disheartened by his appraisal—admittedly just—of the situation. Suddenly the dusk-shrouded countryside was dear to him with the nostalgia of the soon-to-be-lost, and he found himself hungrily storing impressions of the familiar tree-arched path which led down to the swamp, giving occasional vistas out over the Great Lake to the mountains beyond, their snowcaps, touched with the last of the wintry sun, hanging mistily remote.

THE air was chill, and when they emerged from the strip of woods and faced the eerie hummock-studded expanse of the great swamp, veiled in a thin mist, their simultaneous involuntary shudder was half physical and half instinctive distaste. Earlier settlers had, indeed, had an almost superstitious fear of this queer grim tract which, alone of the single continent of Alpha Centauri IV, had never been adequately explored.

Right on the edge of the swamp, beside a little stream, was the sturdy hut in which Erasmus lived alone. It crouched beneath a solitary aged tree, and seemed to gaze defiantly out over the swamp, a sentinel against strange night-monsters.

"It's enough of an enigma that he should even choose to live in this desolate place," Anstar said, his shoulders hunched against the chill.

"He's always been a misanthrope, hasn't he?" said Snow, and, to his joy, Anstar detected an awakening hint of interest in his tone.

Anstar knocked gently on the door and then opened it, standing aside to let Snow go in. Softly he shut the door behind him, and they stood for a moment, looking down at the gaunt old man who lay so still on the simple bed. His bush of snowy hair, long bony face, out-thrust chin and thin mouth gave him the look of some minatory prophet of old, but suddenly he opened a pair of blue eyes that gave a noble unity, an almost benevolent humanity, to his expression. When he spoke, his voice was no more than a deep rumbling whisper.

"Good. Ye're in time, but no more than that, for I'll go out with the sun. So listen and do not question, like the good boys ye are, and I'm glad it's the two of ye I'm handing on the secret to . . . since ye were kids I've known, somehow, that you'd be the ones. It's just my own story that I must tell ye, then ye'll know what to do with what I'll give ye . . . or so they said. No,"—as Snow offered him water—"I've not the time for that, I'll last for what I must say.

"I was born on Earth, and came here as a kid with my parents in the first colonial expedition. Yes,"—as Anstar made an involuntary gesture—"that makes me near four hundred year old, and I'm not asking ye to believe that yet, just to listen. When we came here, each family was given land, and on my people's land gold was found. There was all sorts among those colonists, and there were some that would do most things for gold. One night they came. My father caught them, so they shot him, and because mother screamed they shot her, and me they just threw into the swamp close by here. There the Phrynx found me drowning—they'd retreated into

the secret parts of the swamp—and scared wild so I couldn't even scream for help, but they heard me just the same. They reared me in their secret places—'twas their food that gave me such long life—and I got on fine with 'em. I always used to like cats on Earth, and I never missed other men, after what I'd seen of 'em. But when I was grown up they took me to their island out yonder," the old man pointed out over the swamp, his arm steady, "and told me . . . I can hear him saying it now . . . 'to-night we go, for it is written that if we were to fight your people, great harm would come to both. You will live very long—we have ensured that, but you will have few friends. Your people will become noble, but still you will mostly keep apart from them. In the winter of their crisis you will fall ill; then you will give them the plaque, and then you will die'. Then he went into the sort of underground temple they had there and fetched out this," he picked up a rectangular packet wrapped in cloth that lay on the bed, "God, I can remember his great pale eyes looking up at me as he held it out in his tail! Then they all said good-bye to me in one of their choruses that always made me want to cry, like a fountain of music inside your head. But that time I really cried, for they were my friends, and I reckoned they meant to kill themselves so's not to fight. That was the sort they were. And surely, in the morning, they were gone, and I was alone for good. And that's all of it."

SUDDENLY the brilliance was gone from his eyes, and his whisper was so faint that Anstar craned forward to hear him. "Go to the island . . . marsh-shoes . . ." And then, abruptly, he was sitting upright, his gaze once more fiercely concentrated, his attitude tautly expectant. "Their music!" he said, his voice clear and deep. "Their music at last . . ." and sank back.

Anstar and Snow regarded one another silently. The sun was gone, and chill and dark and the alien hostility of the swamp crept apace into the little room, but still they stood there, mute.

Finally Snow raised his head. "I'm glad you made me come," he said. "You. . . he has given me back my perspective."

Anstar spoke quietly. "I wish we'd seen more of him, for our sake, I mean, for I don't believe he wanted to see more of us than he did. And he died as he wished—as he *knew*, apparently, that he would. You believed his tale?"

"I can't conceive that anyone would invent such a story on his deathbed."

"I agree. But its connection with our present position does seem remote."

"Perhaps," said Snow with a spark of his old dry humour, "we'd better go somewhere where we can use a light and have a look at this plaque, before we come to a final decision about that."

The Anstar of a year ago would probably have retorted; the older Anstar held his tongue for a moment. Then he said, "Come then—we can talk as we go. What did you make of his talk of the Phrynx?"

"You're the historian. Yet I don't remember your ever mentioning them—or it?"

"The history of our early days is pretty uncertain. But there are records of the early landings which speak vaguely of large cat-like animals supposed to have been seen, but no later references. I've no idea what 'cat-like'

means, as a matter of fact, not being a zoologist—some terrestrial animal, I suppose.”

“Yes, I believe that little black wood antique that stands—used to stand—on my neochord was a cat.” Snow gave a bitter little laugh as memory struck once more. “Come to think of it,” he went on evenly, “I have scores enough to settle with the Galnos. They’ve taken most of the things that I value, but I can get up no enthusiasm for the idea of destroying them. Oh, I know we’ve all agreed to go on fighting, but knowing what she feels—felt. . .”

“It seems that the Phrynx were—of the same mind.”

“God, yes!” said Snow with quiet intensity. “I suppose we’ve *their* blood too on our hands, or on our ancestors’ anyway. That at least she must never know.”

THEY plunged into the dark tunnel of the path through the woods. A year ago, there would have been the coloured lights of the houses up on the hills, and the glory of the crystal tower by night, to cheer even while they dazzled. But now that undeclared war had come, the little planet was dark by night, as in its primeval state, save that invisible detector beams probed far out into space, searching for the first sign of the savage swoop that must be maturing; that, here and there, grim little neutronium barrels betokened Snow’s weapon, a warden which might be helpless against a forewarned enemy; that, below the ground, or in darkened buildings, many were working on active defence or on war production or research; that mechanical communication and efficient but unsightly transport had been improvised where, for two hundred years, their lack had never been felt by these peaceful, individualistic people.

The Bioesthetics Institute itself was now largely given over to research more directly military than that which had produced the Blue Antheria; though that plant, in view of its great share in the earlier victory, was still being worked upon. The building, which had been such a landmark, was now dark-green to match its surrounding woods. When the two finally emerged into the dimness of the glade, it was only a sharper blackness than the trees, against the pale sky.

It was pleasant to close the door and switch on the light, to see unambiguously. Anstar blinked and smiled at Snow, saying, “Although it’s rather an unorthodox time of day, I think we must have an Executive meeting at once to discuss this business. It’s the advantage of having no government and running anything that needs running with a technical executive, that we can get on with things at once if it seems necessary.”

“Yes. Though I don’t suppose the One’s decisions take much longer to be ratified. Shall we have a general strategic and research discussion at the same time?”

“Yes—it’s about due. Amber’ll be here, I imagine. I’ll call Merrill and Dracon.”

“I suppose we should have someone in place of. . .of Vara?”

“Not this time, old fellow,” said Anstar. “Perhaps we’ll discuss it later on.” He turned down into the narrow raw concrete staircase that led to the deep-dug, neutronium-sealed cellar that was the nerve-centre of the planet’s communications and defences. The heavy door slid smoothly back as the

operator within satisfied herself, from the infra-red scanner, that he was friendly.

"Hullo, Selene," he said to the slight, dark girl at the switchboard. "Anything happening?"

She smiled, looking up at him with an intense, large-eyed gaze which she employed indiscriminately on all males, and which never failed to flurry Anstar. "I'd have radioed you before now if there had been," she said. "Not a quiver out of a single beam. Sometimes I almost wish it would start, and be over with—all this is such an awful waste of time."

Anstar grinned, remembering her peacetime diversions, which he regarded as a like waste of her undoubted intelligence. "Anything on the Earth ultranews?" he asked.

"Not really. Fighting still going on in the Sirius system, but it's beginning to sound as if they've got the upper hand. Several atrocity stories, suggesting they're leading up to using Black Cross."

Anstar, sighed. "If it hadn't been for the chemist who discovered that devilish substance, the Galnos would probably never have got outside the Solar System. He's got a lot to answer for. Nothing about us, I take it?"

The girl shook her head. Then, not looking at him, she said, "Have you seen Merrill to-day?"

"No—I'm going to, though. Meeting in half an hour—that's what I came down about. Will you call him and Dracon?"

"Yes—I suppose he'll tell you to-night." The eyes focussed on his again; the voice thrilled with vicarious pride.

"Not springing an ultimatum or starting a revolution or anything, is he?"

"I don't think I'd better say any more until he's told you himself."

Anstar nodded as if dismissing the subject, and Selene turned back to the switchboard; but as he went upstairs he was thinking very seriously. Merrill's logic was the cold, inhuman logic of the pure scientist. And as a synthetic chemist, both his theory and his technique were sheerly unsurpassable.

II

ANSTAR cleared the little jewel-like glasses from the table, leaving the linen bundle where it lay in the centre. He slipped back into his chair and surveyed the other four who sat silent. As always, there was tension, the feeling of working against time, the knowledge that at any moment the general warning might sound, a cacophonous prelude to a holocaust of final destruction; above all, the instinctive reaction against *talking* when action might be being taken. He himself, comparatively unimaginative and unemotional, was not proof against these desperate surges of irrational energy. How was it with the others? As always, his thought was: people, even the best of what we regard as a superior people, are unpredictable, imperfect at the mercy of tastes and distastes—*human*. A machine would function perfectly, once its instructions were given, but *we* for various and often unworthy reasons, can't even agree on the instructions.

He glanced at Merrill, whose keen dark face was expressionless as usual, save perhaps for the faintest tightening of the lips. An enigma; no, perhaps the clue to Merrill's makeup was his passion for chemistry, subordinating everything else, giving an amazing naivete to his attitude to life in general. Certainly he was no machine. Dracon: bland and blond, his plump placidity

most misleading, for he was a genius at electricity, and otherwise both sensible and broad-minded in any field except aesthetics. Amber: her delight in argument seemed to have been transmuted into a sparkling happiness which the worst of crises could not tarnish. Finally Snow, whom Anstar regarded worriedly. Snow's deep reserves of wisdom had often been his own anchor in the past, but Vara's illness had hit him terribly hard. . . ah well, thought Anstar, he seemed better to-day than for some time. He spoke rather formally.

"I called this meeting not only because Snow and I have a special report to make, but also because we're about due for another general discussion on strategy, and on the present position of the research. To begin with, I wish to tell you of Erasmus's death . . ." Word for word, he repeated the old man's dying speech, saying at the end, "He himself was obviously convinced that what he told us was of the first importance; so we must do our utmost to make all possible deductions from it."

There was a short silence. Then Merrill spoke curtly. "It sounds a most complete collection of nonsense to me. Hard thing to say about a dead man, I know, but really I don't think we should waste time on it. I should say he was delirious."

"I can assure you that he was not," Snow said warmly, raising his eyes from the table and looking steadily at Merrill.

"Before we rush into argument, hadn't we better look at this plaque or whatever it is?" put in Dracon mildly, reaching a hand across the table.

Anstar unwrapped the linen, revealing a rectangular slab of green stone, perhaps twenty-five centimetres by ten. One surface was plain; the other was completely covered by a fine etched design of lines, with here and there a minute pattern of concentric circles, reminiscent of the "Newton's Rings" formed at the point of contact of a lens and a plate. Dracon examined it minutely, going over it with a pocket magnifying-lens, and then, smiling but silent, passed it to Merrill. The latter looked at it cursorily, remarked "a pretty antique, doubtless of great sentimental value to Erasmus, but of no value to us," and passed it back to Anstar, ignoring Snow and Amber.

ANSTAR offered the plaque to Amber, who shook her head, saying "It's not in my line." Snow took it, turned it over, looked at the light through it, and said "I notice it's neolith."

Merrill smiled superiorly. "Meaning that whoever made it knew the synthetic Heavy Glasses before we did? Well, I noticed *that*, but remember, neolith of that exact shade occurs naturally here, that's how we came to synthesise it. The stuff was quarried, obviously."

Snow said quietly, "Did you notice that it was optically inactive? All the natural neolith is double-refracting."

"The inference being," said Anstar, "that whoever made that not only knew of neolith but could synthesise it, nearly two hundred years before we discovered it."

"Not necessarily," said Merrill sharply. "There's nothing—except this fantastic story—against its being modern, if it is synthetic."

Dracon's smile had been steadily broadening throughout this exchange. Now he spoke. "I think you people have missed rather an important angle of this business—the design. Doesn't it strike you that it's a circuit diagram?"

"Lord!" exclaimed Anstar. "Of course! I knew it reminded me of something! But what's it for?"

"Oh, I've not the least idea—for one thing, there's no indication of what the components are made from. And there are parts I don't understand. But I can understand enough to see that it's something very much out of the ordinary."

"Would you say," asked Snow, "that humans had drawn it?"

Dracon pondered this for a moment, gazing intently at the fine-lined diagram. Then he said slowly, "I *think* so . . . *might* be another race who knew our conventions very thoroughly—and whichever it was, they knew more of electricity than we do, unless they were just being funny. There's a crystal in the thing in a very unusual position—either it must be a very unusual crystal, or there's something missing."

"In any case it looks as though Merrill's been a little hasty in condemning the plaque as an antique of barbaric origin," said Anstar quizzically.

Merrill flushed. "Oh, I don't deny it *may* be the product of some race of geniuses who chose to live in the swamps and finally got wiped out by our relatively stupid and ill-equipped ancestors. But I *still* don't see what *use* it is."

Anstar had picked it up again. "May I borrow your lens a minute, Dracon?" he said, and then spent several minutes silently going over the incised surface. He looked up at Merrill. "Would it make sense if these little ring-systems were simplified atomic diagrams, indicating the elementary composition of the components?"

Merrill almost snatched the proffered plaque and lens, and in his turn studied the design. "It could be," he said finally, "except for one, which makes nonsense of the whole thing. This crystal of Dracon's certainly would be unusual. The diagram calls for it to be of pure element 121, which is ludicrous—no one has yet synthesised an element within twenty places of it in the Periodic Table, and there's every reason to believe that such heavy elements cannot exist."

"Not so fast, Merrill," said Anstar sternly. "Let me put the position briefly. Dracon's finding is that the design is a logical, if obscure, wiring diagram, designed by people of technical attainments probably higher than our own, with the reservation that the position of a crystal calls for it to have very special properties. Your finding is that the materials of construction are logical with the exception of this one crystal, which, being of a somewhat improbable element, might be expected to have somewhat unusual properties. Doesn't it all hang together?"

"Well, if it does," said Merrill with rising anger, "what *is* the use of it? We don't know what the thing's for, and we couldn't build it if we did. *We* at least can't make element 121."

"I can tell you one thing," put in Dracon. "It's got an image-screen of quite a usual type."

"WELL, time's getting on," Anstar said, glancing at his watch. "I'm going to pass on and give you my own deductions from Erasmus's speech, before asking you to add yours. I consider, to begin with, that it was a simple statement of fact from beginning to end, and I feel that this plaque strongly supports that view." Snow and Dracon nodded. "Consequently

I conclude that the Phrynx were a race of highly-developed creatures who inhabited this planet before our arrival; their technical attainments were great but they made little practical use of them; they were very adept biologists, were musically inclined, and had some tentative method of predicting the future. For temperamental reasons they chose to die rather than fight the human colonists."

"Balderdash!" burst out Merrill almost violently. "You sound like some story-book for boys . . ."

"Oh, be *quiet*, Merrill!" interrupted Amber angrily. "Admit, as I do, that this is outside our sphere, and don't *delay* things so!"

"Delay!" Merrill said more quietly, but with a bitter laugh. "Here are you people talking about this silly old man and his plaque—and even if the whole thing is true it's no good to us . . . while I . . ." He hesitated under Anstar's stony gaze.

"Yes?" said Anstar.

"I . . . I'll tell you later on, when we're reporting on research," said Merrill. "But," his voice began to rise again, "I don't *like* all this vague semi-artistic surmise. It's no substitute for logic."

"Has anyone any constructive comments?" asked Anstar.

"Seems to me there are just two things we can do," Dracon answered. "Build the thing minus its crystal and see if that gives us any idea what it's for, and meanwhile, put someone more optimistic than Merrill onto making element 121." Merrill snorted, but Dracon went on unperturbed. "Crystal or no crystal, I think it's well worth making on the principle that anything new's worth looking into. It might work with less efficiency with a crystal of some more available element."

"There's another thing we must do," said Snow thoughtfully, "and that is to obey the old man's last behest and visit this mysterious island."

"If it exists," said Merrill cuttingly. "And we mustn't forget the marsh-shoes or whatever they were, while we're turning over this heap of mindless maunderings."

Anstar successfully resisted the temptation to throw the plaque at Merrill's head, and said mildly, "I thought you'd have known about those, they're a special type of thing that you have to wear in the swamp—however, we must get on. Dracon, you're in charge of the technical side of this thing. You'd better co-opt one of Merrill's atomic people for the transmutation. I'm sure he won't mind. Right?"

"Right!" said Dracon cheerfully. Merrill started to say something, but thought better of it.

"As for visiting the island, I'll attend to that—perhaps you'll come, Snow?" went on Anstar. "Now—has anyone anything to say on the general strategic situation?"

"I FIND it extremely disturbing," said Snow, "that the Earth news continues to make no mention whatever of us. It's natural enough that they suppressed the news of their disaster here, but it seems to me that this absolute silence is bound to be noticed even by their population after a while. This leads me to think that their attack will be in the very near future."

"I'm not sure, Snow, that I quite agree with that," said Anstar slowly. "For the terrestrials themselves, they may be putting around plenty of

stories by local radio, which they wouldn't broadcast on ultra because there are still neutrals who might check up. But in any case, I don't see the Earth population in its present state being worried to the point of any kind of action by a six months' silence about us. What do you think, Dracon?"

"I agree. And I'd like to endorse our policy of silence on the more penetrating ultra-beams, which Korphu and others have been suggesting should be used for propaganda broadcasts. I think that might precipitate things."

"I think so too," said Anstar. "But you know what Korphu is. The trouble is, he *has* a certain following amongst the more lazy-minded. However, we can keep him quiet for as long as necessary. Now, on the technical side, Dracon, how long will the Galnos need to organise for a successful attack?"

"I can't believe it'll be for another six months at a minimum. They've had to analyse and interpret the spectographs of their defeat here, then to decide whether to neutronium-sheathe their fleet or find a substitute for atomite, both as fuel and explosive, which isn't detonated by our weapon. By the time they've made the choice, done the research, and produced the necessary amounts—yes, more like a year than six months from now."

"And there's another thing," said Anstar. "We can expect they'll be fairly cautious even when they are ready, because they'll reason that if we have one such powerful weapon we may have more. And they know almost nothing of what's going on here. I'm rather surprised that they've done nothing in the way of scouts or spies."

"Yes," said Dracon. "It all suggests that when they do attack, it'll be with long-range weapons—rocket-bombs full of Black Cross and such things. It's lucky that hydrolyses too rapidly for it to be used as a spray or smoke. Of course, they'll be well aware, if they've correctly analysed the effects of the Snowbeam, that it destroys Black Cross—but if they used neutronium-coated bombs, we couldn't destroy it till after the detonation."

Anstar nodded, and Merrill, who had continued to look extremely sullen, broke in sharply. "Look here," he said. "The thing to do, instead of talking all round the superficial aspects of the situation, is to reduce it to its essentials. There are five possibilities. We may attack and destroy the enemy; we may incapacitate him, as with anaesthetics; or we may attack and fail. Alternatively we can wait here to be attacked, in which case we either prevail or succumb; but even if we prevail, the campaign's not over, and sooner or later we'll have to face the same situation again. Further, I don't consider we have much chance of surviving a concentrated Black Cross attack in which neutronium is intelligently used. Therefore I'm in favour of concentrating on immediate attack with the object of totally destroying, at least, the Galno forces on Earth and in the Solar System. My opinion is that neither narcotics nor hypnosis will work, and the time is long past when we can have scruples about killing such people."

"Thank you, Merrill," said Anstar. "That's a most useful analysis, but there is at least one possibility that you've overlooked: that we might persuade them to stop fighting." Merrill laughed outright, and Amber glared at him. "There are also," went on Anstar, ignoring the interruption, "a number of imponderables which to most of us are *not* superficial. You are leaving out of account the very things which make us what we are, rather than barbarians like the Galnos—however, before we make decisions as to policy, I think

we'd better discuss the research position." Again he looked at his watch. "Amber, what have you to report from you section?"

"VERY little on the main lines—but there's one very interesting side-line which looks as if it might be a help to Dracon on his new job. You know we've been systematically examining the plant mutations which the mesotron-beam I left uncontrolled produced?"

Anstar nodded.

"Well, one of them has become a most remarkable organism. It's so changed that we haven't been able to identify the plant from which it came, so we just call it 337, its investigation number. It now derives its energy from nuclear breakdown, controlling the output by synthesising simultaneously a suitable amount of a heavier element. But the amazing thing is that it can do this with any element you give it, apparently—it just transfers alpha-particles and produces a mixture of elements with atomic numbers two more and two less than the original one. Of course, sometimes the products are toxic to it, but it can start on anything."

"Good lord!" said Anstar. "I suppose, then, the process must be cumulative—I mean, if you give it element N, you'll get smaller amounts of N plus four and N plus six and so on, as well as N plus two?"

"Oh yes," said Amber. "And really, using the accelerated growth technique, it's quite an efficient method of transmutation. That's why I thought it might be useful to Dracon."

"It might indeed!" said Dracon. "It certainly seems, to me at least, a more hopeful-looking way of making element 121 than the usual physical methods of transmutation, even though there'll have to be so many steps in the process. What do you think, Merrill?"

Merrill grunted. "It's promising enough," he admitted. "But a pity we've got to use it at such an empirical stage. If it weren't for the war, we could really investigate the process—it would probably shed a great deal of new light on atomics."

"All in good time, Merrill," said Anstar. "Amber, could you lend Dracon someone who's been working with this plant, and give him a hand with the biological techniques?"

"Of course," said Amber. "Come and see me after the meeting, Dracon, and we'll talk it over. Now, on the antheria research, I'm afraid things aren't so promising. The spore-form of the seed that we've developed is now resistant enough so that we could bombard Earth with it from far out in space. But even then it would be a risky job, and I don't think we've much chance of hypnotising the entire population of Earth that way. Otherwise, we've been working on projecting the image of the full-grown plant: a colour-stereo has almost as powerful an effect as the flower itself. But the trouble is, that's only suitable for short-range work, because you can't project visually with ultra-wave. Unless you've found out how, Dracon?"

DRACON shook his head. "No, and we haven't developed a beam that'll penetrate more than a millimetre of neutronium, either," he said. "Theoretically it is possible. But the practical difficulties are tremendous."

"Well," said Anstar, "this is all rather negative. One thing—I think perhaps we're still too much on material rather than mental lines. The

antheria's the right kind of thing, of course, but at best it's only a defensive weapon unless we can use it in the Solar System. On the other hand, even assuming we had an infinitely destructive weapon, I don't . . ."

Merrill was on his feet, speaking harshly. "We'll leave these endless hypotheses and come to facts. We *have* such a weapon at our disposal. I have developed a toxic smoke of the same type as Black Cross—semi-volatile, lipoid-absorbed, activated to explosion by potassium beta-activity in living organisms—but several million times as lethal. No conceivable respirator or breathing apparatus, except a self-contained neutronium chamber, is proof against it. One kilo suitably distributed would be ample to deal with a planet the size of Earth, and for this purpose I've been adapting one of the Galno cruisers which we've neutronium-sheathed."

There was a short silence. Snow had become deadly pale, he stared fixedly at Merrill as if hypnotised with horror. Then Anstar spoke quietly.

"Yes—I suspected you'd got something of the kind. If it's as toxic as you say, even a few molecules must be dangerous, and the risk of diffusion through the walls of ordinary containers considerable."

Merrill's voice now had a triumphant ring. "It's as you say. One molecule within the body is almost certain to start a chain explosion which will be fatal if in a vital part. One of my experimental animals—a medium-sized lamir—was nearly blown in two by what cannot have been more than two molecules; yet it's quite harmless to nonliving structures. I've found it necessary to manipulate it in centimetre-thick neutronium apparatus. It has other advantages over Black Cross, it doesn't hydrolyse to a non-volatile powder in moist air, and it's stable on storage. I've named it D for reference—it's the fourth substance of the type I've investigated—and with its aid we can end this war in short order and get back to worth-while research."

Anstar glanced at his watch once more, frowned, and spoke slowly. "This becomes a question of ethics, for I don't think we will question that this terrible substance is as toxic as Merrill claims, or that the population of Earth could in fact be destroyed by means of it. I think, too, that Merrill deserves high praise for his courage in being prepared to work, of his own free will, with such a material . . ."

Merrill fidgeted impatiently.

"Once already we have faced this problem," continued Anstar, "in a less acute form. Then, when we were unanimous in refusing to descend to the use of their own methods upon the Galnos, Elm took the decision out of our hands. As a result, perhaps illogically, we decided to continue the struggle—at first defensively and finally by some form of psychological offensive. I say that we must not allow our hand to be forced again, and if your voting agrees with mine we will ask Merrill to discontinue his work, destroy the records and the substance itself, and turn his talents in other directions. Those who agree?"

Amber, Snow and Dracon raised their hands at once; but as Anstar turned to Merrill, the latter rose to his feet. He was holding a Westing, now, with which he covered Anstar.

"I THOUGHT this just might happen," he said icily, "and I came provided. Ever since I've been old enough to formulate my own scale of values I've considered that this idiotic business of trying to love one's

neighbour even if he's a regimented moron who's trying to exterminate one's race is so much fantastic nonsense. I'm well aware that most people on this planet, owing to misdirected education, don't agree with me. That is why I and a few others who do are taking things into our own hands. You'll thank us in a few days' time, when we've achieved permanent peace and security. As to this 'psychological offensive' of yours, you know as well as I do that you've no plan of action—not the vaguest idea of what form it will take. You haven't even replaced our absent psychologist on this Executive. I therefore call on you to resign—as a matter of formality. I and my people will thereupon clear up the war in the minimum time."

"A *coup d'etat*, eh, Merrill?" said Anstar easily. "You can't do it, you know—you can't abnegate your upbringing, which was not misdirected but only partly successful in your case, merely by taking thought. The guilt of what you propose would hang round you, round all who acquiesced in it, like a vampire's cloak. We . . . you'd be *worse* than the Galnos, for you'd do this frightful thing of your own free will, knowing what it meant and that it need not have happened. Added to which, it would *not* end the war—it would merely stimulate the Galno populations throughout the Galaxy to frenzied and terror-stricken resistance. Added to which, the 'morons' you propose to exterminate are not the sub-humans you fancy, but mostly people like ourselves, desiring nothing more than peace and happiness, caught up in something too strong for them. You can easily verify that by talking to our Galno acquisitions. No—for your own sake, if for no one else's, I can't let you do this."

"Don't be silly," said Merrill, who had listened impatiently. "Your emotional appeals mean nothing to me. And you aren't in a position to refuse. If you attempt to resist or communicate I won't hesitate to kill all four of you, for the good of the greater number."

Anstar smiled sardonically, again casually looked at his watch.

"Well?" said Merrill sharply. "What do you say? If you're realistic about this, all I need do is isolate you by locking you in here until the job is done, in twelve days' time, I calculate. Otherwise . . ." his hand tightened on the Westing.

"Before we make our decision," Anstar said, "may I ask a question or two?"

"I suppose so."

"For one thing, is Selene in this?"

"She knows and sympathises with the general plan—but not the minor detail which arises from your opposition." Now that things seemed to be going his way, Merrill had regained his usual impassiveness. His grip on the Westing had relaxed, though his aim was still accurate. Anstar, too, appeared quite unruffled. Sitting back, he gazed half-smilingly up at Merrill, his eyebrows raised. Snow and Amber, on the other hand, were pale and tense, and Dracon was nervously rubbing his chin with a slightly shaky hand.

"Another thing," said Anstar. "Suppose we succeed in disarming you and destroying your product, will you consent to work with us on other projects, or will you be un-co-operative—leaving out of it this talk of killing?"

"In that unlikely event," said Merrill, smiling, "I'd do the logical thing. Do my best to repeat these tactics if you gave me a chance, unless of course . . . unless . . ." He broke off, looking slightly puzzled, and put out a tentative hand to the table. The Westing suddenly slipped from his grasp and clat-

tered to the floor, and agonised understanding came into his eyes. Half-palsied, he managed to thumb his wrist-radio, and spoke haltingly but feverishly. "Selene . . . it's Merrill . . . Anstar drugged me . . . quickly D Korphu . . ."

BUT already, as he crumpled to the floor, Anstar was out of the door and halfway downstairs. He was back in a few minutes, with a bewildered and distressed Selene, who gasped and paled as she saw Merrill limp on the floor.

"Poor Merrill," said Anstar. "It's curious to have one's intellect so completely focussed on just the one thing—chemistry—and outside that no imagination, no appreciation of human values. Even his plan for a single-handed victory was really rather imbecile, though I suppose with a weapon of such power, he *could* have brought it off."

"But how did you do it, Anstar?" Snow asked shakily, while Selene gazed mutely down at Merrill.

"I've been watching him and his work, off and on, particularly since he started going over one of the captured cruisers and taking odd equipment on board, and something Selene said this evening made me think. So I just put a few of those semi-soluble micro-capsules of stasitin in his drink, and when it turned out I'd been right it was merely a question of stalling for time. After all, if he hadn't turned militant, we could always have given him the antidote, with apologies. As it is, I'm afraid we'll have to do without him pro tem. Sorry, Selene," turning to the white-faced girl, "but you must realise we can't have him issuing ultimata and threats and trying to run the war on his own, particularly when his first idea is to start something that we can only survive by virtually depopulating the Galaxy. We'll revive him when the position is such that even he would realise there are better ways."

She was tense, trembling, her gaze stony, but when she spoke it was in a strangely controlled and flat tone.

"Yes, Anstar. I understand. Now I must go back to the post." She turned and walked out, without another glance at Merrill.

III

SNOW straightened up; shuffled his feet awkwardly, and looked almost piteously at Anstar. "Must I really wear these things—must we walk there, come to that?" he said. "It's as much as I can do to avoid slicing my ankles off at each step!"

"I'm afraid so," said Anstar briskly. "I've hovered about over the island for hours, in a copter, but it looks a most queer and treacherous kind of spot, and desperately uneven for landing. Anyway, this'll do you good. All you have to do is swing your feet outwards at each step."

"But why the razor-edges to the shoes?"

"You'll find out. It's lucky Erasmus taught me a little about swamp-walking."

On a fine day, even of wintry sunlight, and from within itself, the great swamp looked less sinister on the grand scale, but more inimical as to detail, than from outside, less malevolent but more actively dangerous. Its colour was not the uniform olive-drab that distance lent it, it was astonishingly variegated; the dome-shaped hummocks turned out to be not little islands,

but monstrous sponge-like plants whose pores oozed a dark-green viscous ooze, fatal attraction for a myriad winged insects. Here and there were spaces of open water, full of swimming things and large-leaved floating plants, some a mass of purple or yellow or scarlet flowers, giving off strange scents. Perpetually the slimily iridescent surface of the pools was broken by great bubbles which burst steamily into the colder air. And over it all flopped and skipped and scuttled and wriggled a multitude of legged or flippered or tentaculate creatures, unspeakably active.

"None of the animals are particularly dangerous—to us," said Anstar, as Snow shied at a floppy, many-tentacled, shiny black thing which writhed with hideous efficiency through the jungle.

Snow shuddered. "It's horrible," he said. "One feels that if they thought of it, if the struggle for survival became just a fraction more intense, they'd spill over and just dispossess us of the rest of the planet."

"So they probably would, if it weren't for the volcanic substrata that keep this place always warm and impregnated with sulphur dioxide. All these organisms—plants and animals—are quite distinct species, restricted to the swamp. They can't exist outside it, and it's thanks to them our entire atmosphere isn't sulphurous. You can feel the warmth already, it's why there's always a mist here at night, and why there's never any snow in this hemisphere—not much of a place to be after dark, this."

Snow shuddered again.

They paddled steadily forward on the broad snowshoe-like aluminium floats which were essential to swamp-walking. Presently they came to an expanse of level brilliant green, for all the world like the smoothest of trimmed lawns.

"Thank the Lord!" Snow said with real relief. "Some easy going for a change."

"Don't be too sure," said Anstar warningly, as Snow stepped out onto the refreshingly level patch. The moment his foot touched the surface, he became aware of a curious irregular squirming movement beneath the broad shoe, and then, with horrid suddenness, the whole edge of the shoe was fringed with wiry dark sucker-tipped tentacles, which sprouted from beneath the seeming grass. As Snow, with an exclamation of disgust, almost fear, tried to withdraw his foot, they constricted about the shoe, reaching hungrily inwards towards his ankle, and were instantly severed by the knife-edge. With a great effort Snow wrenched his foot away, revealing a shadow of it, as it were, in tentacles which had erupted through the innocent surface.

"Good God!" he said shakily. "What is this thing? I thought you said none of the animals were harmful!"

"I'm sorry, Snow. I should really have told you of it. My cursed habit of prodding people to see the way they'll react—no, it's no animal, it's a plant. The green stuff on top is all part of it, but it isn't always as easy to spot as this particular patch, hence the razor-shoes."

"It's horrible. I'd no idea there were such things on our planet! Can we get across it?"

"Oh yes. All we have to do is slide our feet slowly forward—the surface is quite firm but porous. And you'll find, interestingly enough, that the whole area is a biological unit that's capable of warning its subdivisions that we're too much for it. The attack will weaken and then stop when we've

cut down a good deal. Evidence of instinct at least, if not actual intelligence. But look . . ."

HE picked a large flat leaf from a neighbouring plant and tossed it onto the green patch. Instantly a little group of tentacles flicked up about it, and it was torn in shreds. The next moment it was gone, and the lawnlike surface once more unmarred.

Again Snow felt a tremor of utter, nauseous repulsion, but he fought it, assuring himself that his attitude should be that of a scientist towards a rather wonderful natural phenomenon. Resolutely he slid his feet out across the innocuous-looking green patch, and, as Anstar had foretold, the attempts of the plant to drag them down grew feebler and finally died away altogether.

"I fully understand the popular superstitions about this place," said Snow when they were across. "I suppose for that reason no one's ever made a thorough study of it. Yet it seems to me that there are many things here which might be useful to us."

"I think Erasmus collected a good deal of information about it. I suppose that's all in his hut still, if he made notes. After all, he seems to have lived actually in the swamp, or at least on the island, for some time. As to using it in the war, I rather agree with Amber—these biological methods aren't much use for long-range work of offensives."

"You think we need something more like Merrill's D?" Snow's tone was bitter. "Did you destroy that, by the way?"

"No. He seems to have hidden it somewhere. Selene says she doesn't know where it is. She's not speaking the truth, of course, but I don't think it's particularly important."

"I can't help feeling rather insecure while that devilish stuff is at large somewhere."

"Oh, it's bound to be safely sealed up—Merrill's conscientious enough in his own sphere. And I doubt if any of his hangers-on would have the courage to handle it while he's incapacitated." Anstar's eldritch smile flickered briefly. "Merrill's taunt was pretty close to the mark," he said. "I admit I've very little idea what final form our offensive *will* take. In fact, the whole set-up's pretty strange really, isn't it? I was thinking that, during the meeting. Our only powerful weapon is certain to have been nullified by the time of the next attack, and we haven't developed any alternative except D, which can't be used in defence and which, in any case, we've vetoed—in favour of a fantastic scheme started by a dying man of perhaps doubtful sanity, of digging up archaeological relics in the hope that the obscure prophecy of an extinct and perhaps mythical race may be fulfilled."

Snow shook himself, with a half-laugh. "For some reason," he said, "that makes me feel better . . . if only . . ."

"I know, old man. But she'll recover."

For a few minutes they walked in silence. Then Snow said, "Is it really wise to let Selene go on working in the control-room?"

"Afraid she might be a second Elm?"

"I think that's rather unfair, Anstar. We owe our lives to Elm—and he paid for his faults with his."

"Yes. I'm sorry. That was a bad thing to say. Habits die hard. I still

can't help regarding people as machines and then being irritated when they don't function like them."

"Even when their behaviour's unexpectedly admirable?"

Anstar smiled. "I like to think of myself as a superior thinker," he said. "But you, perfectly unpretentious, are always finding me out in logical evasions. I'm surprised I haven't an inferiority complex."

"I think you had—once."

Anstar looked sharply round at his companion. "You keep a lot to yourself," he said. "To know but not to interfere is your motto. I know less and interfere more." And then, "No, I think Selenes all right. I know she was infatuated with Merrill, but it'll wear off. And she's far too good in the control-room to waste."

SNOW did not press the point, and they picked their way onward in silence. There was need for few detours, for there was comparatively little open water and large tracts either of firm mud or of plants so matted together that it was a matter of indifference what lay underneath. After two hours' going they came suddenly in sight of the island, already quite close.

"There it is," said Anstar. "It'll be interesting to see what the soil really is. From a ship it's most strange—black, and with nothing growing on it . . . ah yes, it does look as if there's some kind of a building in the middle. I thought there was."

"Perhaps it's a synthetic island."

This supposition was strengthened when the two set foot on the mysterious island, for its black surface was hard and apparently untarnished, though of a dull finish, and there was a certain order, if not regularity, about its strange convolutions.

"We needn't really have been scared of landing a copter on this," said Anstar. "It's neolith."

"Synthetic?"

"Well, that's no more fantastic than supposing a neolith deposit this size could be natural, when you consider its mode of formation. If it is synthetic, it only goes to support our deductions about the Phrynx—that they were amazingly advanced technically but didn't bother much with their accomplishments—just threw off a neolith island as a temporary refuge and left it at that."

"There's one thing that I feel is rather out of harmony in their prophecy," said Snow, "and that's the bit about Erasmus's people becoming noble. Well, that can mean no one but us. And there's nothing particularly noble about us."

"Yes. I've thought about that a little, too. I suppose it's just that we have—were to have—more the same type of temperament as the Phrynx: an avoidance of mechanism in living. That doesn't seem to me to be so much noble as natural. But come along, let's have a look at the temple or whatever it is."

They moved towards the centre of the island, where the strange curves of the black rock swept up towards a miniature peak. Suddenly they came upon a concealed depression, a saucer-shaped hollow in the shadow of the highest point.

"Why, hullo!" exclaimed Anstar. "There's certainly a big enough area here that's suitable for landing a copter. But see the way it's been contoured

so that you'd overlook it from the air! They weren't taking chances!"

"I wonder *why* they were so careful—if they meant us to find it eventually?"

"Yes . . . perhaps we'll know more about that when we've had a look at the temple. I see there's an opening—a doorway, is it?—under that overhang."

The opening was a tall narrow slit running obliquely downwards into the rock-face. Unhesitatingly Anstar switched on his flashlight and slid sideways into it. Almost at once the slit curved round to the right and widened, and he found himself in a tunnel, walled with rough-cast dark blue neolith, which spiralled downwards into the heart of the island. At first the tunnel was irregular, the ceiling sometimes bulging down so that they had to stoop, but after a few turns, it became symetrically shaped and the walls smooth and polished, reflecting dazzlingly the flash-beam. A few moments later, Anstar switched out the light, stopping abruptly as darkness enveloped them.

"I thought—yes, there *is* a light coming from below," he said, and began cautiously to move forward once more. Turning a corner, they came suddenly into a great chamber, filled with a dim golden-green light which seemed to exude from the gleaming green neolith walls. It must have been at least a hundred metres long and fifty high, and it was empty, save for a small dark object on the floor, not far from the entrance.

"Lord!" said Anstar. "This *is* a place, isn't it? Luminous neolith: I should say any lingering doubts about the Phrynx are dispelled."

"Yes. And our forefathers exterminated them, virtually."

"Look, Snow, there's no *use* in tormenting yourself with continual reminder of that. We know we wouldn't do it now. And we know that they were so enlightened that they not only chose such an end rather than fight—and win—but also handed on to us no blame, but a heritage of knowledge. If I'm right, a heritage of victory."

Suddenly Snow's face seemed illumined by some inner light, and he smiled his own gentle smile. "I'm sorry, Anstar," he said. "I . . . it's strange, I've just seen everything in quite a new way, from a much larger point of view—personal things *don't* matter, ultimately . . ." His voice died away as he cocked his head in his old familiar gesture, as of one listening to distant music.

Anstar could find nothing to say. He squeezed Snow's arm, and then moved quietly away to examine the lone object that remained in the hall—a legacy from the Phrynx?

A NEUTRONIUM box, about twenty centimetres cubed. The lid sprang up at a touch on the single stud, revealing contents stranger than anything Anstar had foreseen. For the box was packed with jet-black eight-sided crystals.

"No—don't touch them, Anstar. I think I know what they are, and they might be dangerous. The neutronium box suggests so."

"Element 121?"

"Yes." Snow's tone had a strange sureness. In fact, thought Anstar, he seemed all of a sudden more himself, than even before Vara's illness. "What are we going to do with them?" Snow went on briskly.

"Take them along, surely, and get Dracon to build the thing at once."

"I suppose so. At least, I agree that that *seems* the best thing to do, but I've got some kind of a prejudice against it. Still, you're right, of course."

Anstar picked up the box and tucked it awkwardly under one arm, and the two turned once more to the spiral tunnel, whose entrance was a dark oval in the luminous wall of the cavern.

The moment they emerged into the little hollow in the centre of the island, Anstar's wrist-radio burst into a frenzy of activity. He hastily acknowledged, and a message poured from the tiny receiver.

"Good heavens, Anstar, where've you been? I was beginning to think they must have got you. It's Dracon here—I've been calling you for nearly an hour!"

"Sorry, Dracon. I've been entombed in neolith. *Who* did you think . . . but go ahead."

"I'm in the control-room. When I got here this morning—about an hour after you and Snow had left—I found all the personnel, guards and everyone, unconscious, Merrill gone, Selene gone, and I imagine the D's gone too."

"Is Amber all right?"

"Oh yes, everyone's all right. Amber's very annoyed, though, she says it was some plant gas that she ought to have recognised in time to protect herself. But that isn't all—just after I took charge here, the alarm went. Object about the size of a patrol-ship approaching from Sol direction at about normal cruising rate. In other words, certainly a ship, most likely an enemy one. No message, and I haven't tried to communicate with it. What do you recommend?"

"Leave it till we come, but keep a Snowbeam ready for it, in case. Though if it's hostile, it's probably invulnerable too. Anyway, it can't be here till this evening, if you picked it up at maximum range."

"Right. And what about this Merrill business?"

"Broadcast on planetary to say there's to be a special announcement at twenty o'clock. That'll give us time to think. Oh, and tell the guards to use ultra-absorbers in case of any more gas attacks."

"They're already doing so. But what about the D?"

"They won't use that—on us. Oh yes, put an extra guard on all ships with spacedrive."

"Right. I hope you've had a more successful time?"

"Perhaps. Tell you about it when we see you. Off."

"Off it is."

Anstar turned to Snow. "You were right about that girl. If we do the wrong thing now, we may have a revolution on our hands."

"What do you plan to do?"

ANSTAR frowned. His immediate reaction to Dracon's, and now Snow's, instant assumption that it would be he who made the decisions, had been a mild surge of self-conceit. And after all, he had told himself, I am chairman of the Executive: it's natural they should refer these things to me. But the thoughts that followed were not so comfortable. He knew well he had no monopoly of brains; he had made plenty of mistakes during the first skirmish with the Galnos, last summer. But had he a monopoly of initiative? The original plan had been his, and though it had brought them nearly to disaster, everyone seemed perfectly content to leave tactical and strategic planning for the future to him. Was it good for him? Was

it good for *them*? He found himself wryly acknowledging that Merrill, misguided though he was, at least had the courage of his convictions. Well, he thought with an uprush of impatience, if they persist in leaving things to me, I'll handle them, and if they go wrong, we'll all know who's to blame. There was some self-satisfaction in the thought . . . he realised that Snow was still waiting for him to reply.

"We'll have to have that referendum now—I mean, on whether we're to adopt Merrill's plan or not. Rumours will be getting around, and it's they that might cause the revolution. I'm sure that if we tell the full story quickly enough the very great majority will back us up. And then, unless he kills us all off, there's nothing much Merrill can do. His only asset will be the D: he'll be cut off from ships, equipment, trained personnel. And he can't *use* the D on us. It isn't just that it's a weapon suitable for extermination on a planetary scale; it's *only* suitable for that. Once he's released it there's a strong probability that everyone will be killed, that the planet will be permanently uninhabitable. And even Merrill would hardly wish to be marooned in space, the sole survivor of his single-handed victory."

"It's horrible, Anstar! Sometimes I feel it *must* be a nightmare, that I must wake up and find myself back . . . with Vara . . . with my music . . ." He shook himself. "No—that's wrong. This is a Galactic crisis, not a personal or even a planetary one. What are you going to offer the people instead of easy victory à la Merrill?"

"I'm going to do what I should have done as soon as we'd dealt with Merrill. Tell them about Erasmus and let them choose."

"Much can happen between now and twenty."

"But it won't, once Dracon's broadcast. Except Merrill and Selene themselves, no one's intimately enough involved to bother much until they hear what I'm going to say. You know what they're like."

"Yes. Do you think, perhaps, we should leave these crystals here, now?"

"I do. Apart from a tiny sample for Dracon. For, if there's any logic, this ship should contain a spy. And in that case, one potent substance lying around loose is quite enough!"

IN THE control-room, when they arrived tired and bemired after a hasty re-crossing of the swamp, they found Amber in charge, and the staff once more at full strength. At Snow's questioning glance she shook her head sadly.

"She's no better, I'm afraid, Snow dear. But no worse."

"I'll go up and see her," said Snow. "You can carry on, Anstar?" At Anstar's affirmative nod he turned to the door, stood aside for a moment to let Dracon come in, and went out.

"Queer," said Amber. "You'd think he'd been told she was getting better. He seems infinitely more cheerful and . . . integrated."

"I know," said Anstar. "It happened quite suddenly, this afternoon. But before I tell you about all that—look, Dracon, take this." He handed over a twist of neutronium foil, containing a tiny flake from one of the black crystals. "Put the mass spec. on that and verify that it's element 121."

Dracon started, smothered an exclamation as Anstar went on.

"Then get together whatever stuff you'll need to build that apparatus, and ferry it over to the island in a copter. You'll find a landing-place right in the middle and the cave will be ideal from the concealment point of view

—impervious to sound and all radiations. There are plenty of crystals in a box there.”

“Right,” said Dracon, his eyes shining. “I’m looking forward to finding out what that gadget is for—and we’d have been a long time making enough 121 our way. Though mind you, we’ve got some—several micrograms in one of our concentrates. Clever fellows, those Phrynx, weren’t they?”

Anstar smiled, and then said thoughtfully, “D’you think you could land on that island in the dark?”

“Lord, yes,” said Dracon cheerfully. “I could radiolocate one-millimetre contours on a neolith island in a swamp, meaning no disrespect to your surveys, of course.”

If Anstar was piqued, he gave no sign. “Then don’t go till it’s dark. And take a pair of marsh-shoes for daylight trips. There’s no harm in giving impression that the island can’t be landed on from the air, in the present unsettled conditions.”

Dracon nodded and went out, calling back from halfway up the stairs, “I made the announcement about your speech, by the way.”

“Good!” Anstar smiled down at Amber. “I’ll take over here, my dear,” he said.

“Don’t you want to work? After all,” she laughed ruefully, “I’ve had three hours of enforced sleep to-day. I could stay on here till midnight if you like. Anyway I only took over from Dracon an hour or so ago.”

“No, it’s all right. I’m going to try and talk to this fellow. I see he definitely is making for us.”

HE examined the great rectangular screen which showed the position and motion of the intruder, and then went over to the ultra-transmitter, adjusted the directional beam controls, and began to send a persistent call.

Almost at once a new golden line appeared on the indicator of the ultra-receiver which showed the frequencies at present being received. The operator, at Anstar’s nod, tuned in.

“. . . Centauri IV? Is that Alpha Centauri IV? Is that . . .”

The voice, even distorted by ultra-transmission, was a distinctive one, deep and vibrant.

Anstar was back at the transmitter, sending “Yes.”

“Fine . . . fine! I *knew* you’d beaten ’em off. I’m a refugee from Earth.”

“You want to . . . er . . . throw in your lot with us.”

“Yes—don’t sound so damned suspicious! I’m not loaded up with Black Cross or anything.”

“You can’t expect us to take your word for that. Can you answer some questions, or is there a risk of your transmission being picked up by Earth or by pursuing ships?”

“Ask away. I’m using a directional beam, and I don’t notice any ships after me.”

“Well. What made you think we had held out against the Galnos?”

“Common talk, partner, common talk. Six months ago the bulletins were full of Alpha Centauri IV. How you’d freely joined the New Order, fruits, flowers and all. Five months and three weeks ago—not a word about Alpha Centauri IV. And from the spacefield where I worked, for my sins, four cruisers were marked up missing. So, the first chance I get, I snatch up a

little patrol-boat and light out for the place. And here I am. Name of Vickery, incidentally, an artist by inclination."

"Why didn't you get in touch with us sooner?" asked Anstar unemotionally. "You stood a good chance of being . . . disposed of, you know."

"Suppose I did. But began to feel my story was kind of thin, and kept putting off the evil hour. I can face being burnt—it's the thought of being turned back I can't stand—to that hell of slavery." The man's voice shook a little.

Anstar was silent for a moment. "Very well," he said eventually. "You can come in and land." He gave co-ordinates for approach. "I'll get in touch with you by radio when you come out of spacedrive, and tell you where to come down. Meanwhile, of course, we'll have to keep you closely watched, and I must warn you that we'll have to destroy your ship at once if you make any remotely suspicious action."

"Yes, yes, that's clear enough. But don't be so stern about it. It reminds me of home—so-called."

Anstar smiled. "Oh, I hope as much as you do that it won't be necessary. Off."

"Off it is."

"D'YOU think he's genuine?" said Amber.

"It's possible. But there's also a considerable possibility he's a spy. And some chance he's trying to sneak up and drop a Black Cross bomb. It's lucky the Snowbeam destroys unshielded Black Cross. I'd better just warn all the posts."

Briefly he radioed a general stand-by to the look-out and Snowbeam posts, and then turned back to Amber.

"There are a couple of things I'd like *you* to do, as well," he said.

"My orders for the afternoon, you mean, Commander?"

He shook his head, frowning. "Please, Amber—not even in fun. There are too many people who really do think like that."

She swooped down and kissed him. "You know, Anstar, poor darling Vara *was* quite right about us. We haven't quarrelled once since."

"I know—though I've heard you arguing often enough with other people." Suddenly grave, he said, "Amber, just what are Vara's chances at present?"

"Fairleth says she has an even chance of . . . of living . . . but a lesser one of recovering her sanity."

"I suppose the real trouble is she doesn't want to."

"Yes. If only we could tell her some good news, but of course, as she is now, you can't. She doesn't understand. I doubt if she even hears, that's what's so *awful*." Her eyes were bright with tears, and she turned away from him. After a moment she said quietly, "What is it you want me to do?"

"Go up to our room and set up a spectrograph and a mass-spectrograph to cover this man Vickery's ship as it comes down, the rocket-trail, that is. He'll be landing on Field F. Oh yes, and if you *can* get a reflection X-radio-graph from the metal of the hull—"

"You want to find out if they're still using atomite?"

"That, and other things. Oh yes," thoughtfully, "go on with the observations after the ship's landed."

"There won't be anything to observe."

"That's as may be. Keep it up for ten minutes or so, anyway."

"I've no idea what's in your mind, infuriating creature! What's likely to happen to the ship after it's down?"

"You run along and set up that stuff like a good girl, and don't ask difficult questions."

"Mmm. I suppose it's an outside chance, and you don't want to give it away in case nothing does happen."

"You can put it that way," said Anstar, reflecting uneasily that there might be some truth in this accusation.

"What are you going to do about Merrill and Co.?" asked Amber.

"Not much, except this broadcast. You see, there's nothing much they can do. They can't use the D here, and apart from that they're hopelessly ill-equipped and few in numbers. Merrill's only hope is to steal a cruiser, and I think we can prevent that. The broadcasts should harden public opinion against them, and when he's observed the effects of that, and tried hiding in the woods and getting Korphu to co-operate with him for a few days, I think he'll come back and offer us his services."

"And you'll accept them?"

"Why not? You can trust Merrill to behave according to pure logic. When he's been shown he can't force his plan on us, he'll accept the next best thing from his point of view—to come back to chemistry and comparative comfort. The workings of his mind are very simple, really. The only thing I find a little surprising about him is that he can be interested enough in any *person* to have attracted Selene."

"Well, you know what she is. And it's all on her side. He just uses her as a servant."

"I believe you're right," said Anstar thoughtfully. "What'll happen when she finds that out?"

"Don't ask me! I've never bothered to make observations on the subject. People are too difficult—I stick to genetics and subatomics."

She kissed him again, skipped over to the door, which slid ponderously aside, and disappeared upstairs.

THE door shut. Anstar settled comfortably back in his chair and began to run through the script of his talk to be broadcast in a few hours. Occasionally he gave a glance at the screen showing the trace of the ship, approaching with apparent slowness, but actually moving through space at a sheerly inconceivable speed.

He finished and laid aside his pen. And suddenly, gazing abstractedly at the control-panels and star-maps before him, he was assailed by a vision of the great Cosmos, of the illimitable black depths sparsely sprinkled with drifting feeble starlights. More sparsely still with flickering consciousness, outposts of humanity now fiercely engaged in self-destruction. What was the reality underlying it—if indeed the question had any meaning? This little control-room, with its buzzing and clicking relays, its glowing tubes and charts, connected only by wires and beams with the outside world, but giving a coherent if limited picture of it—was it any less the reality of the universe than the image man's senses conveyed, any more a mere physical abstraction of its incomprehensible wheeling mightiness? Were men alone in apprehending it, or were there other, greater intelligences, whose scope

matched its own? The Phrynx? Uneasily, he put the idea from him.

Struck by a sudden thought, he called spacefield F and, a little pale and shaken at the thought of the omission he might have made, gave brief instructions. This done, he called a nearby Snowbeam post and gave orders which appeared to surprise its commanding officer. Then he picked up his script and began methodically to re-read it.

IV

"THIS is Dracon calling from the island, Anstar. I'll have to stay the night here—the mist's coming up, and I don't fancy some of the things skipping and rustling round here when I can't see them. I'll be nice and comfortable in the cave—finish building the set by morning, too. Got it half-done and still don't know what it's for. Enjoyed your little talk, by the way, you can have my vote now, for peaceful conquest at all costs."

"Have you some food?"

"Lord, yes. Shall I come back in the morning, or will you be coming out?"

"I'll come out. I want to see the thing. I suppose you're planning to run a power-line to it from here?"

"No, I'm building an independent power-unit. It's worth the extra trouble, with all this uncertainty in progress."

"True. See you in the morning, then. Off."

"Off it is."

Anstar returned to the screen showing the path of the refugee, now a scant couple of hundred million miles from his destination. After a moment's thought, he switched on the ultra-transmitter and called Vickery. Almost immediately he was answered.

"Vickery here. How soon do I release?"

"Twenty-one minutes forty-five seconds from . . . *now*. Further instructions by radio when you've balanced your radio under rockets. Still no signs of pursuit?"

"Not a sign. Don't expect they've missed me yet. Wasn't much use to 'em."

"Are you using atomite-powered rockets?"

"Suppose so—as far as I know." The tone was slightly surprised. "Can't say I've gone into the matter. But it's the usual, isn't it?"

"It's an old type of ship?"

"Gad, yes. Little tin-pot field, I worked on. These crocks are only supposed to cover a range of fifty light-years or so. Off, if you don't mind. I always need plenty of time to work things out before release."

"Off it is."

Anstar put through brief calls to Amber, upstairs with the spectrographs, and to the landing-field and several of the posts. Then he sat back, dividing his attention between the chronometer and the glowing red speck creeping across the field towards the thin golden ring which marked the zone round the planet which, by intergalactic statute (now all too frequently ignored), use of the spacedrive was prohibited as being too swift for safety. The seconds plodded laggardly by and, in spite of his assurances to himself that no possible precaution had been overlooked, tension grew within him. The nagging thought that, if a gas-attack were planned, this might very well be the manner of it. The ship could release, drop a little cloud of

neutronium-shielded Black Cross bombs, and be off again in a fraction of a second—if they'd worked out the implications of their defeat, as Dracon thought. But even then, he told himself sternly, we can trace and cover the bombs until they explode, and then detonate the gas-cloud with a Snow-beam before it spreads—don't be a fool, Anstar.

THE red speck coincided with the golden ring. Abruptly it vanished, to reappear at the edge of the circular field below. At once Anstar was at the radio, calling the ship and giving landing instructions. As he finished, the screen of the infra-red scanner covering the entrance to the control-room showed one of the guard-squad approaching, and a moment later Anstar heard his step on the stair. He touched the control, the door slid back, and the man came in.

"You want me, Anstar?"

"Yes. Take over here, will you? I want to go down to the field and meet this fellow."

"But, Anstar . . . you said . . ."

"Yes, yes, I know. I'll be safe enough."

The man shrugged, sat down in the chair Anstar had vacated, and plugged the tiny 'phones into his ears. He nodded and smiled, and Anstar went quickly out and up into the darkness.

It was a perfect night, though cold—not such a good night for a sneak attack, he reflected thankfully. Far up, seemingly no nearer than the stars themselves, was a tiny streak of lilac, the merest luminescent wisp. It seemed stationary, but as Anstar walked rapidly across the frost-crisped grass to the concreted roadway, it grew perceptibly, and to his mind came a vision of the mesh of interlocking analysing beams which focussed on it as it swung downwards; harmless, but the precursors, if need be, of less harmless beams. The thin whine of the distant rockets swelled in volume and deepened in tone. Was there an unfamiliar quality to its note?

Anstar broke into a trot as the boom became a roar and the rocket-trail a dazzling comet of lilac-blue. He had the odd illusion of running on rubber, for the sound of his footfalls was utterly drowned. As he turned into the field the fury of glare and uproar was suddenly cut off, and he stood for a moment blinded in the darkness. A blast of warm air beat into his face, and he saw the further row of tubular landing-lights, feebly glimmering by comparison, occulted as the ship grounded. A nice landing, he thought. Not so amateurish as he makes out. He advanced across the field, one hand on the switch of his emergency communicator.

A lozenge of light opened in the side of the ship, momentarily framing a burly figure. It disappeared to the hollow sound of the closing door, and Anstar spoke into the darkness.

"Vickery?"

"In person." There was a hint of rumbling laughter about the tone.

"My name's Anstar—erstwhile bioestheticist, now a war executive." Anstar stood at ease, taking in the other's massive proportions as he became dark-adapted. "Of course you must accept my hospitality for to-night at least, though I'm afraid unless you're constantly on the look-out you'll be doing nothing but bang your head on our doorways. You must be more than twenty centimetres above our average height."

Vickery laughed booming. "Oh, my head's pretty hard—on the outside! And thanks for the offer of a bed, though," he peered down at Anstar, "what per cent. hospitality and what per cent. surveillance?" His laugh broke out again, an infectious sound, and Anstar joined in.

"We'll settle any doubts about that in the morning," he said easily.

Vickery made a tentative move away from the ship, but Anstar stayed where he was. "If you'd like to get your kit out now," he said, "we'll let the ground-staff house the ship; we'd better get her under cover, I should think." Casually he flashed a pencil-beam at the hull of the little ship, showing up the dulled metallic finish. "Neutronium, is it?"

"Believe so—think it's standard with the G's now." He coughed, moved uneasily, and said apologetically, "We won't bother about the ship, if you don't mind leaving her here. I've got all the kit I need in my pack here, and . . . er . . . to tell the truth, I'm not used to nights as cold as this."

"Of course. I'd forgotten that on Earth you heat your atmosphere in winter. Well, it's only a few minutes' walk." Anstar turned, and began to walk briskly up towards the Institute, Vickery striding beside him.

JUST as they came out into the glade, the whole scene leapt fantastically into vivid-green against a space-black sky, as a vast glare shot up behind them. The two were flung violently down upon the concrete, deafened by the sharp ferocity of the explosion. As they got uncertainly to their feet the darkness was once more complete.

"God!" exclaimed Vickery shakily. "I think . . . what can that have been?"

"I'm extremely afraid," said Anstar gravely, "that it was centred at Field F, where your ship is—so that the ship must have been badly damaged if it wasn't the actual—subject. It looks to me, in fact, as if some damned fool of a gunner switched one of our beams onto it—they're been covering it, of course. In which case, well, we'll naturally replace it, but as to any of your belongings . . . the personnel of the field, too . . ."

"Too bad about them," said Vickery soberly. "I hope it wasn't my fault in any way. Doesn't matter about the little tin-pot ship, but don't want the death of any of your people on my hands, even accidentally."

"I think we'd better go and see what we can do—find out the worst at once."

They turned back. There was now a red glow in the sky in the direction of the field, brightening momentarily, and as they began to run down the road a tree suddenly flared up, a monstrous torch which brought details of the landscape into macabre relief. A whisper behind them became a hum, and Anstar pulled Vickery out of the way as an ambulance and a fire-tender swept past them.

In the centre of the field, where the ship had been, was a crater. All about were scattered red-hot or white-hot pieces of metal, and the sheds and nearby trees were burning fiercely. Already, however, the firemen were at work on them with powerful jets, while others tackled the crater with carbon dioxide snow to bring down the temperature to a point where the rescue squads could work on it.

Anstar radioed back to the control-room and asked to be put on to the head of the rescue-party, then to the nearby defence-posts. After a few moments he turned back to Vickery, shaking his head. "No one left alive

on the field, and no possible doubt it's our fault, I'm deeply ashamed to say. One of the posts admits to having accidentally thrown a switch controlling our newest weapon . . . still, I suppose pro tem I'd better not talk to you about such things."

"Oh, I—well, glad it's not my fault, anyway." There was more than a hint of puzzlement about Vickery's tone.

"We'll give you a new ship, of course. It'll have to be rather larger, though."

"There's no need." Vickery paused, and resumed more confidently, "After all, if you decide I'm not a spying blackguard I won't want a ship, I'll be glad to stay. And if you decide I *am* one—well——" he chuckled, "—imagine I'll be staying then too!"

"That's true," said Anstar. He did not laugh. After a moment he added, "Well, I think we may as well go; there's nothing we can do here."

"WELL, Amber, what d'you think of him?" Anstar looked up from the spectrograms he was poring over.

Amber slipped from her perch on the window-sill of the long, sunlit room and came over to the table. "I like him," she said. "Striking-looking, isn't he, with that mass of red hair? Any grounds for suspecting him still?"

"Don't seem to be, except the time he picked for turning up. We gave him a pretty severe questioning earlier this morning, hypnosis and so forth, and he came through it all right. That's why I'm letting him wander about, with just a couple of the staff keeping a discreet but continuous eye on him. No need to make him uncomfortable with guard-squads or locked rooms or anything."

"Had he anything useful to say about things on Earth?"

"Not really—of course, you can't expect him to know much of the higher military or political situation there, and he wasn't much interested in technical matters, apparently. As for the people he had to do with, all he felt for them seems to have been contempt. All he wants to do, he says, is rest and paint. I think he'd better do a little work too, though."

"You're qualifying everything—you're not *really* a bit satisfied, are you?"

"Oh, it's not as bad as that. But if he were a spy they'd have made him as investigation-proof as they could. And there's certainly no harm in simple precautions like keeping him away from our Galno converts."

"Yes, I see that. But Anstar, why did you have to have his ship destroyed, as I assume you did?"

"That's a leading question, my Amber, which I'm not going to answer for the moment, if you don't mind."

"I *do* mind."

He kissed her. "Take it from me that it's for the best. You see, we must, at least for the moment, continue to assume he's a spy. Proof that he isn't won't be easily come by. And if he is, we must be careful what we say even when he isn't around—spies thrive on gossip. So don't let's discuss him. Have you looked at these spectrograms?"

She made a face at him. "No, and I don't want to!" Then, smiling, "All right, Anstar dearest, I won't be tiresome! Is there anything in them?"

"It's going to be very difficult to decide. They're fearfully complicated. I'll have to put them through the photoelectric analyser. But the reflection X-radiogram from the metal of the hull indicates neutronium quite clearly."

"Ah! I suppose that means they're using the neutronium-sheathing method rather than the atomite-substituting one—do the spectrograms support that at all?"

"Yes, possibly."

Suddenly she tensed. "But Anstar, if that ship was neutronium-protected, how did you . . . ?"

He put a finger on her lips. "For reasons stated, I'm not going into that at present!" And then, changing the subject, "Would you like to come out to the island and see how Dracon's getting on?"

"Oh yes—does he know what the thing is yet?"

"He didn't last night. I'm not using the radio for . . . things of that kind now."

"Truly, don't you think all this fuss about one harmless artist who' presumably been utterly stripped of perceptible equipment a little—well, fussy? Seems to me, if he's going to get on your nerves to this extent, you'd better lock him up and be done with it."

"Quite undemocratic—let me fuss. I like being thorough. And now come along and I'll teach you swamp-walking. It's really high time you had a chance to study the things that grow there."

AMBER felt inclined to disagree with this when, tired, bedraggled, and shocked by the non-stop ferocity of the struggle for existence by the swamp-denzens, she arrived at the island. She shook herself relievedly as she stepped onto its firm black surface.

"It's terrifying!" she said. "It's like some vile spot of disease on the planet. I feel there's a real danger it might suddenly start to spread, particularly if one of our odd mesotrons happened to produce a favourable mutation."

"Snow said much the same thing. But I disagree. Many of these things will have their uses when we get a chance to look into them thoroughly. And the sulphur-cycle in their metabolism reduces the chances of a successful escape to zero, virtually."

"All the same, I'll dream about the place to-night—squirming, wriggling, bubbling, oozing—ugh!"

"Thoroughly unscientific attitude. Come along and let's see what Dracon's done."

He led the way down the twisting passage into the great chamber, now prosaically but more efficiently lit by two huge arc-lamps strung from standards. Apparatus was scattered about. A little atomic motor was purring away, supplying power and to spare from its small bulk. Dracon was crouching in front of a big image-screen, adjusting the controls and occasionally consulting a circuit-diagram. Suddenly he sensed their presence and straightened up.

"Hullo!" he said. "I was expecting you before this."

"I've been a little held up by this refugee," said Anstar.

"Get anything out of him?"

"Not worth mentioning—seems harmless and pleasant enough."

"Anstar thinks he's a *spy*." Amber dropped her voice melodramatically at the last word. "He's being most mysterious and taking all kinds of precautions."

"Well, it is rather a coincidence that he should turn up just when we've decided that their logical next move is to send a spy," said Dracon seriously. "And if he is one, we've got to be pretty careful, and what's more, if we are careful, he may be more use to us than he is to them."

"That's what I say!" said Anstar heartily. "To be on the safe side I'm assuming he's got long-range scanning devices, radio-interception—everything that might be useful. We've only searched him perfunctorily, and of course we didn't find anything. But down here, under all this neolith, it ought to be safe to talk."

"You could easily verify your assumptions—or otherwise—just by X-raying him," said Amber briskly.

"I know. But we could hardly do that without his knowing—and then he'd know we knew, and his usefulness would be ended."

"Well, if I really believed any of this, I'd be fearfully worried. I certainly wouldn't let him roam around," said Amber.

"Oh, there's no need to be worried," Anstar said. "The real beauty of it is that if the Galnos know about the Snowbeam, which it's pretty certain they do, there's more or less nothing for him to find out. And so long as no one says in his hearing that that's the case, he'll have to go on looking for something that isn't there."

"But why did you blow up his ship? Surely that'll make him suspicious. And *how* did you do it, come to that?"

"No, Amber!" said Anstar. "I'm not going to be drawn on that, just yet."

"Blew up his ship, did you?" asked Dracon. "You know, I'm inclined to agree with Amber that that was over-caution. And it would have been useful to see if they'd anything new."

"Well, we've got the spectrograms of his rocket-trail. I made him think the explosion was an accident, of course. I don't want him to find out I'd moved all the field staff out of range in advance, for that reason. And now, what about this mysterious appliance—is it working yet?"

"I think it's just going to," Dracon said. He went rapidly over the circuit and made one or two minor adjustments. "I'm a little handicapped," he went on, "by having four controls on the crystal which are obviously important, because verniers are specified, but for which there's no zero or indication of units or anything—at least for three of them. They're the ones that actually move the crystal in the three spatial dimensions; then there's one that controls the potential drop across it. It would be a help if I had the remotest idea what the crystal *does*. So the chances of getting anything on the screen without enormous amounts of trial and error seem pretty low to me."

AS HE finished speaking, he threw in a massive switch. Instantly his prognostication was falsified. For, after an instant's swirling blur, the milkiness of the screen cleared to show a beautifully detailed panorama.

"Well," said Dracon cheerfully, "that's the first time I've ever assembled a piece of apparatus and made it work without having the least idea of what it was for. Seems to me it's a tribute to something."

Anstar was examining the image. "Looks like one of the things I was wondering if Vickery had—a spying device," he said. "That's a scene on our own planet it's receiving, but without the need for any transmitter."

He began shifting the spatial controls, and the image shifted correspondingly, first to the left, then upwards, and finally receding as more and more of the foreground came into view.

"But Anstar!" burst Amber excitedly, "it isn't as simple as that—it's not *just* a spy-ray. Look at those flame-trees on the right there!"

"What about them!"

"Silly, they're in spring leaf—not as they are now, but as they were about nine months ago!"

"Lord!" exclaimed Anstar. And then, as the implications of this struck home, he and Dracon made a simultaneous dive for the rheostat which controlled the voltage across the crystal. Anstar's hand reached it first, and he doubled the external resistance. The scene on the screen flickered and then was sharp again, but now there were changes, slight but noticeable enough. The flame-trees were leafless, and in the foreground three little figures now stood, frozen in attitudes of action round what appeared to be a Snowbeam post in course of construction.

"I was planning to set up a new post there," said Anstar in an oddly breathless and uncertain tone. "The leaves hid it in the first scene, of course."

Dracon, too, spoke with an unusual note, almost of awe, in his voice. "Well, as I've already said, those Phrynx were clever fellows!"

"Oh!" broke out Amber impatiently. "You *are* the most infuriating people! What is the thing?"

"It seems," said Anstar gravely, "to be an instrument which I never would have believed possible—a Predictor."

"But doesn't it imply determinism?" said Dracon.

"Not necessarily. On our views, it must depict the most probable future—but we, by some less probable action, should be able to make the picture change. In fact, if you look at the detail of the image, you'll find that it's fluctuating the whole time."

"Well," said Amber, "let's go the other way, let's see how far we can see into the future. Perhaps we'll see ourselves as we're to be in ten year's time—" She stooped swiftly and twisted the knob of the rheostat in the opposite direction.

AGAIN the image blurred and then became distinct once more, though not quite so distinct this time. The scene was recognisable by its contours as the same. But it was greatly changed. A pall of heavy black vapour hung over it, swirling about the bare holes of the trees, obscuring the distant hills, behind which the sun, a huge ball of dim red, was sinking. The earth was bare, the trees lifeless; here and there a redder glow than that of the sombre sunset showed where a fire was springing up. And overhead hung a cruiser marked with the black-and-white cross of the Galnos.

Anstar was just in time to catch Amber as she fainted.

"I hope we are right about this determinism business," he said.

AS Snow and Anstar faced one another in the control-room, their erstwhile positions seemed to have been reversed. Snow's expression had regained its old introspective placidity; Anstar's usual quizzical detachment was marred by a worried frown.

"I really don't see what we have to worry about—yet," Snow was saying.

"The Phrynx have given us a legacy unbelievably more powerful than we had any right to expect. It's only a question of finding out how best to use it—a matter for experiment."

"But Snow, the thing prophesies disaster, which means that there's a high, if not overwhelming probability that our present course is leading us to defeat, and in a few months' time—and taking into account the advent of the Predictor."

"Well," said Snow with surprising briskness, "the thing to do first is to find out whether the prophecies of the instrument are accurate; second, to discover whether, by unlikely choice of action, we can alter a prophecy once made. At the worst, it may mean an attempted evacuation of the planet. But it does seem to me there's plenty we can do about it."

Anstar smiled. "Thanks, Snow," he said. "You've restored my sense of proportion. I'd almost begun to deify the damned machine, or the Phrynx. I've a temperamental distaste for this kind of thing, I'd quite forgotten to approach it scientifically. But, Snow," he went on more slowly, "how is it that you're . . . you're so . . .?"

"You notice I've changed?" Snow said. "So do I, but I know no more about its cause than you. It happened—you remember?—when we were in the cave on the island. I had been feeling hopeless, more than hopeless, till then. And then suddenly my whole viewpoint changed. I—no, I



can't explain it—but it's as if while listening to a symphony I'd without realising it been concentrating on what one instrument was saying—and then suddenly awakened to the whole gloriousness of the music surrounding that little thread—" He paused, and resumed in his ordinary tone "—tell me, why did you bring me down here to discuss this predictor business?"

"Vickery. He's bound to know we're doing something on the island, before long, but in case he isn't what he appears, the less unshielded conversation about details, the better."

"Surely a little far-fetched to think he could eavesdrop over long distances. Still, I suppose it's as well to be safe. I had a talk with him after you'd gone, and he seems genuine enough to me. He paints well, too; he's done a lovely little thing of the woods up behind here. He wants to do a landscape looking out over the swamp".

"You couldn't want a better excuse for prowling round and observing than painting," Anstar said a little sourly. "And it seems to me that the choice of the swamp suggests tactical rather than aesthetic consideration."

Snow laughed outright. "Well, so long as your people hang round him the whole time, he can't do much—except, I hope, paint."

"We ought to make him do some work."

"He'll ask for it before long—he's an active man. Lord!" Snow broke off abruptly. "I'd completely forgotten with all this Phrynx business! Merrill and Selene turned up this afternoon!"

Anstar sprang up, and then subsided again. "What a day it's been!" he said. "Penitent, were they?"

"Not particularly. Bad-tempered. They'd quarrelled with one another and they'd been thrown out by Korphu as a result of your referendum and its obvious effect on everyone. Needless to say he had been sheltering them, but it turned out he was in a minority even among his own crowd."

"What did you do about them?"

"Oh, I was non-committal. I said you'd see them when you got back. Actually Vickery turned up at the Institute at about the same time, so I more or less had to make the whole thing social and casual, introduced them and so forth."

"Merrill hadn't the D with him?"

"No. He said very little. He'd obviously thought the whole thing out, but the conclusions didn't please him particularly. I think Selene will settle down all right, though. She seemed rather taken with Vickery."

Anstar's frown had returned in force. "I don't know that I care for two of our dubious elements getting together so quickly," he said. "I think I'd better go up and see them."

"Do. I'll take over here—I find it rather soothing."

Anstar stood up, stretching himself. He was irritated by what seemed to him Snow's over-casualness, but firmly told himself to be more tolerant. "Have you . . . is there any better news of Vara?" he asked.

Snow shook his head. "No change," he said. "I know what it is. I can face it now. She's refusing to open her mind to reality because, to her, reality has become intolerable. Consequently it can last for . . . forever, unless we can alter the present reality of war."

Anstar made as if to speak, but checked himself.

"Yes," Snow said simply. "I know what you were going to say. Even

if we do change it, there may be no way of ever letting her know. That may very well be." He sat down in the vacated chair and turned to the control-board, and Anstar, his throat queerly dry and constricted, went out and slowly upstairs.

SLIDING back the door of the big ground-floor laboratory, once the nursery of the Blue Antheria, he discovered a laughing group clustered about one of the benches at the far end, so occupied that they did not notice his entrance. The centre of the group was the towering figure of the Earth refugee, who seemed to be drawing swiftly in charcoal on a large piece of board. He paused to brush back his mane of red hair, and again his laugh came booming round the room. Selene, one hand on his shoulder, was leaning over the drawing, laughing helplessly; the two members of the Institute staff detailed to keep an eye on Vickery were scarcely less amused.

"Selene!" said Anstar sharply when a comparative pause occurred. "I've only just learnt that you'd returned."

She started up guiltily and faced him, the laughter dying out of her expression. "I . . . I'm sorry, Anstar. I should have come to see you before."

"Are you prepared to take up work with us once more?"

"Yes," she said. "Though I still feel Merrill's idea had something to be said for it, particularly now I've heard from Vickery about what the Earth-people are like . . ." Her gaze swung round to the refugee, the same adoring wide-eyed gaze with which she had so often surveyed Merrill as he worked in the laboratory. She went on vehemently, "But Merrill was so cold and horrible to me, I was sick of it all long before he decided to come back——"

Vickery interposed. "Don't be too hard on the child, Anstar," he said. "I know it looks I have plenty nerve, advising you before I've been here one whole day—but it's my fault she didn't see you before. I kept her here looking at silly pictures. Thought she needed cheering up."

"Oh, we don't go in for punishments much here," Anstar said. "Except the ones administered by oneself." He turned back to Selene, and, prompted by his worry about the way things were shaping, spoke sternly. "You must remember, Selene, that acting on a minority opinion in a matter that affects the majority is anti-social; one of the few things we must not do. By all means try to convince us by argument, but as to action, you'll be far more useful, to yourself as well as to us, back at your job in the control-room. We've missed you there."

His concluding smile took some of the sting from his words, and she smiled uncertainly back.

"By the way, Vickery," Anstar went on. "It occurs to me you may know a good deal of useful stuff about camouflage, which I imagine they must have studied much more on Earth than we have. If you'd like to help, these two fellows will take you along to have a talk with our people, in the morning." He glanced briefly and sardonically at the amateur wardens, who were looking somewhat shamefaced, and Vickery grinned understandingly.

"Love to," he said cheerfully. "With or without my inseparable escort. Anything I can do to help wipe out those damnable Galnos to the last man."

"Well, we don't feel quite like that about it," said Anstar a little coldly. "But you've probably got a much better right to. Where'll I find Merrill?"

he asked Selene as she turned to go.

"Oh, I don't know. In the lab., I expect," she said bitterly.

WOMEN are a problem, thought Anstar, as he climbed the stairs to the chemical research laboratory. Selene was, it seemed, going to be just as difficult with Vickery as she had been with Merrill.

Merrill was, indeed, busily at work, dismantling all his cumbersome neutronium apparatus and storing it away. However, at Anstar's entrance he straightened up and spoke with even more than his usual cold precision.

"I've come back, Anstar, not because I'm convinced you're right, but because your propaganda, and the spinelessness of my associates, made it hopeless for me to go on. I admit you've outmanoeuvred me completely."

"What are you planning to now now?" asked Anstar mildly. "I see you're taking down all that neutronium stuff."

"That doesn't mean I've abandoned the idea of using D," Merrill said evenly. "I've done all the necessary research, and I've enough for my requirements, hidden where you'll never find it. It's just a question of waiting my chance to take a ship."

"Well, that's fair enough. For my part, I promise to confine you to this room, double the guard on the ships, and instruct you as to lines of work."

"You can't force me to work."

"I suggest," went on Anstar, ignoring this, "that you try and prepare a compound as potent as D but with merely a soporific or paralytic effect."

"It's theoretically impossible," Merrill said shortly. "Anything acting in the manner of D must be destructive. Nothing acting in any other way could be a trillionth as efficient."

"Go ahead and have a try—your estimates have been wrong twice already."

"I'm damned if I do," said Merrill angrily. "It's not only useless but unnecessary. I came back not to assist in your squeamish methods but because I did not wish to starve and saw no other way of avoiding it."

"Well, I'm sorry, Merrill. I hoped you were a bigger man. However, before I go there are two questions I must ask you. One, how does the Snowbeam affect D? And two, does anyone but yourself know the whereabouts of the D?"

"The first question is of technical importance, and I'll answer it. When unshielded by neutronium, D is exploded in the same way as Black Cross or atomite."

"And the second?"

"I refuse to answer."

"You should remember that in a less liberal-minded community such an attitude would be the prelude to hypnosis or administration of a truth-drug, and that a prelude to execution."

"If you persist in your attitude the Galnos will see to that for you."

Anstar paused at the door to look quizzically back at Merrill. "One thing about you, Merrill," he said. "I don't believe you'll bear the slightest personal grudge if we do happen to win the campaign in our way. Meantime, do what you like—in here."

"How do you know I won't make atomite bombs and blow my way out?"

"You know less than I do about yourself if you think you're capable of that," said Anstar cheerfully.

Merrill was not amused. "In fact, I propose to read up electronics for a week or so and see if anything has been overlooked that might bear on the question of a neutronium-piercing beam," he said.

"That is no longer necessary."

Merrill was startled out of his controlled cold. "Do you mean that one has been developed?"

Anstar shut and locked the door without answering. "I'll really have to clear things up soon," he was thinking. "But without consultation there is more risk of a mistake . . ."

SNOW gazed, fascinated, at the scene of desolation that still held on the great screen. "I must say," he said, "it certainly does give you the feeling of an immutable future. Has there been any sign that the prophecy for a particular date can be changed?"

Dracon shook his head. He was unusually silent and dispirited.

"There's a flicker about the detail that shows the inessentials are perpetually changing," said Anstar. "We're leaving that scene up in the hope that we can get some idea of a better strategic plan. I was thinking perhaps we could begin to alter the direction of the lines of research, at the rate of one a day or so—then we'd know if any particular change was for the better."

"No," Snow said decidedly. "That's putting ourselves in the hands of the machine. And remember, it's telling us that the probability is that we're to be defeated. Meaning that the enemy is preparing an attack for the fairly near future—before we can mount our psychological offensive—which our armaments will not withstand; as we had deduced already. No. What we must do is put the principles of this marvellous instrument into our hands, not merely use it empirically."

Anstar smiled a little ruefully. "I'm prejudiced against it," he said. "I don't think it is a marvellous instrument—or else it's too marvellous. It seems to take things out of our hands . . . oh, I can see we must use it now we've got it. But half the time I don't believe in it, and the other half it scares me."

Snow's answering smile held a hint of apology. He turned to Dracon. "Have you the least idea of how it works yet?"

"Not even that," said Dracon. "Of course, it must be all bound up with the properties of the crystal, which I've been working on, but so far I've not struck anything unusual. It's a mystery to me how the thing even gets its information; no light, sound, or radiation of any known form can get down here through all this neolith. We're as effectively insulated as if we were in the control-room itself—and there are no wires connecting us with the outside."

"Yes, that is a point," said Snow thoughtfully. "It must have a scanner of some kind, mustn't it? And the scanner must be almost universe-wide, if the forecasts are to be accurate in these days . . ." He broke off with a sharp exclamation, almost a gasp.

Simultaneously, the grim picture on the screen dissolved into a featureless swirl of colour, which itself smoothed to a pearly grey. And then, in a flick, the same vista of the planet was back, but this time it was as they knew it from the past, bathed in spring sunshine, brilliant with spring flowers.

"Yes," said Snow again. "That's proof enough, isn't it?" Even now

there was no hint of triumph in his tone. "What it must do is to analyse the perceptions, deductions, intentions of living things—in fact, their *thoughts*. The moment I realised that, the whole balance of probability of the campaign changed."

"Not very complimentary to you, was it?" said Anstar. "It considered—fantastic to speak so of an instrument—that you were unlikely to guess its principle."

Snow smiled. "Either that or it isn't integrated to deal with future thoughts. Do you realise that Erasmus gave us a clear clue to the whole business? You remember his telling how the Phrynx found him? 'I was too scared to scream, but they *heard* me just the same'. I hardly noticed that at the time."

"Lord, yes! Telepathy, of course." Anstar regarded Snow gravely. "The Phrynx could have been masters of the universe, if they had wished. And instead, they chose to abdicate in favour of a race of barbarian invaders who fought one another for gold. Why?"

"I think," said Snow slowly, "yes, I *think* that they must have found, from this or a similar instrument, that that was the best course for the universe. That the invaders had potentialities. In fact, they told Erasmus as much."

"We've a long way to go before we're in their class."

"Yes,"—soberly. "We've still to find the means for defeating the Galnos without embittering the whole future of humanity—or even to prevent them from defeating us."

"I THINK we have that," said Dracon quietly.

The other two, who had forgotten his presence, swung round, startled. "This thing may have had me baffled, but now that I know it's essentially a thought-analyser I think it should be fairly simple to use its principle to build a thought-transmitter."

"Mass hypnosis!" exclaimed Anstar. "But will it be possible to focus or direct it?"

"Oh, I think so. It may mean that if we want to broadcast concentrated thought to Earth, we'll need a great many projectors. Anyway I'll build one at once and we'll try it out. Of course it may have no suggestive or hypnotic effect."

Snow shook his head. "I'm sure it will," he said. "It's the logical outcome of the fundamental idea. It must be what the Phrynx planned for us. You know," he turned to Anstar, "this makes me feel much better about the Phrynx; that we find ourselves carrying out the great plan they conceived, realising their unselfish ambition, seems wonderful to me."

"No, I'm not really with you there, Snow," said Anstar decidedly. "That we have our instrument of victory is wonderful . . . but I can't help wishing we'd developed it ourselves. Perhaps it is small-minded—but I'd rather make my own comparatively feeble efforts and mistakes, than know I was just a tool in some superior being's master-plan, that I'd been allotted a task nicely suited to my limited powers. And it does seem to me the Phrynx have been over-subtle. If they wanted us to survive, why not give us the complete story instead of a kind of palimpsest which, their own machine must have told them, would very likely be no help to us?"

"No, you're wrong, Anstar—what does it matter who strikes the decisive

blow? And I believe that the Phrynx's plan was designed to bring out the best in us. They must, it seems to me, have backed what they felt to be the optimum future for us, one in which we might very well go under, in which victory would not be as simple as a ripe grape falling into a child's hands."

Snow had spoken with unusual warmth, and Anstar, aware of an antagonism beginning to build up between them, paused to consider his reply. Meanwhile Dracon, caring little for ethical discussion, had begun to assemble equipment for the first thought-transmitter, and a sudden exclamation from him put an end to the argument.

The sunlit vista, happy augury of their future, had disappeared from the screen, replaced by the kaleidoscopic swirl of colour. For agonising minutes they watched, while transient images flickered and dissolved, hardly recognisable, and still no settled image came.

Anstar was the first to recover his self-possession. "I take it neither of you two has had an idea which might have caused this?" he said. Both shook their heads. "Logically it can only be Vickery," he went on, his tone increasingly hesitant and self-accusing. "I should have told you—but there's no time now," he added with sudden decision. "I must get back to the mainland at once. I'll take the copter—there won't be any further need for that deception, if I'm right."

Swiftly he was out of the chamber and running up the passage. Snow followed more slowly. Dracon shrugged and returned to his work.

BREATHLESS, his heart pounding, his vision blurred by sweat in spite of the chill of the winter evening, Anstar arrived at the surface and was about to leap into the copter when he was arrested by a despairing shout from out on the swamp.

It was Vickery. In the half-light Anstar could just make out his burly form, not very far from the shore of the island. He seemed to be clutching at a shrub, and there was something wrong about his pose, the set of his legs. Anstar shouted something inarticulate as he hastily strapped on his marsh-shoes. Then, as he picked his way as quickly as possible in the tangle of snares and delusions that was the swamp, he began to think. This must be the situation which had upset the Predictor; which could only mean that death for Vickery meant death for Alpha Centauri IV. And so I'm right after all, he thought, and found himself single-mindedly intent on rescue.

It was, of course, the tentacle-plant which had caught Vickery, whose makeshift boards strapped to his shoes had delayed the plant just long enough to let him get a grip on a tough and deep-rooted shrub. Now, however, they were more of a liability than an asset, as the great masses of tentacles round his ankles showed. Little by little the shrub was yielding, and Vickery groaned in agony at the strain and pain of the attack of the greedy plant, which did not bother to engulf its victims before beginning to digest them.

Without a word, Anstar seared the tentacles at their point of emergence with his Westing. The further bunches, waving on the outskirts of the struggle, straining to get a grip, retreated, and Vickery scrambled to safety. His ankles were already raw and bleeding, and little trace remained of his usual aplomb.

"Thanks, Anstar," he said shakily. "Didn't realise you had sharp edges on those things when I made me these, or the need for 'em."

Anstar did not reply, but motioned the other towards the island. Vickery, however, was not to be repressed for long, and said in much more his normal manner, "Got fascinated by this damn swamp—nearly got bloody well swallowed up in it! Sorry—I know you warned me to steer clear of it."

"I notice," said Anstar, not bothering to keep suspicion out of his voice, "that you've—lost your escort."

Vickery stepped onto the firm ground of the island, where Snow was silently awaiting them, turned back to Anstar, and spoke in a new and sharper tone. "Thanks for putting your gun away, Anstar," he glanced at the little weapon which he was now holding, "saves trouble. I know you've suspected me all along; you're about the only one. Though why in hell you've just saved my life, why you didn't search me and X-ray me and do all the things I'd been led to expect, in that case, I'm damned if I know. Not that you'd have found much. So one of your primitive life-forms has been nearer to bringing me down than any of you. *It* didn't give me a chance to draw my gun."

"So you are a spy?" said Anstar, quietly and levelly.

"Yes. I'm a spy." Vickery had resumed his bluff-good-fellow manner. "And I've got what I came for. News of your two new weapons. A *sample* of one of them—the only sample, I believe. In point of fact I've exceeded my instructions."

"My God . . . the D! You've . . . hoodwinked Merrill?" Anstar's tone was still quiet; his voice shook a little.

"Quick, aren't you? They told me you were. Yes. It's easy to work things when you can tune in to conversations ten kilometres away, and act as a direct radio receiver. Wonderful what surgeons and electrical engineers can do to one's insides, isn't it? I've heard everything worth hearing since I came, except what went on in your cave here, and in the control-room, and most of that I could piece together."

"What are you going to do?"

"Why, I'm little Selene's hero and Merrill's white hope, and I'm taking them to Earth—there's a lot Merrill hasn't told me yet. They've been a little more credulous than you would have, Anstar—they think I'm going to Decimate the Galnos. Did you hear my capital D? Appreciate it? You thought it too frightful to use. I fancy the One won't agree there."

"YOU devil!" burst out Snow, his face chalk-white, drawn with misery. "Go, and don't torture us any more!"

"My dear Snow! Why, I've followed your precepts absolutely since I've been here—not a life have I taken! You'll find my two attendants safely tied up, and the spacefield guards and Institute and control-room people comfortably asleep with your excellent stasitin. The intelligent Merrill had it all planned, and the ardent Selene was only too eager to carry it out. I . . . er . . . did leave a little bomb at the Institute. The controlling circuit's aboard the ship I'm taking, and I'm afraid some of your friends *might* get hurt if you turned your neutronium-piercing beam on me and I forgot to keep the circuit closed; they're . . . quite close to it. But I'll make it easy for you to do the right thing. I'll take your radios and marsh-shoes, and

then you'll have to stay here for a while. I'll use your copter myself—and right glad I'll be not to have to walk back!"

"Why not just dump the D on us and have done with it?" asked Anstar bitterly.

"Heavens, no! The One would never forgive me for a shoddy job like that! We can clean up the Galaxy with a ton or so of D. We must have that sample. Besides, you folk are not coming to any haphazard end. You are to be made a supreme example of the folly of resisting the One. A fleet loaded with Black Cross-neutronium bombs was all but ready; I've warned them to call that off in view of your newer beam, but the alternative plan, Anstar, though it'll take longer, is much more artistic!"

"Do you think the One will readily forgive your returning with no details of our new beam?"

"Ah, no. You don't decoy me into that cave where you keep it! I admit I had hopes of this last little foray, but I must be content with what I've got. It's late—Merrill and Selene will be wondering what's happened to me, and the position over there is precarious enough without my going clambering in caves with you two in attendance. I hadn't really expected to find you here—though it's lucky you were!"

"Well, shoot us then, now that we've served your purpose. What's stopping you?" demanded Snow passionately.

Vickery shook his head in mock sorrow. "Snow, Snow . . . you don't realise how I value my peaceful record here! In fact, I've done my allotted job, which was merely to decide which method of extermination was to be adopted. And on top of that I've secured a massive bonus—the D, which will assure the New Order forever, if Merrill's estimate is sound. No, as I've said, you—particularly Anstar—are to *live*, for a little. But I'm talking too much, always my failing. I'll make you a present of the one-and-a-half pictures I've done here, as a small token of all the help you've given me—talk about being presented with things on a plate! Your trouble is, you're all too damned friendly. I've never seen so clearly the failings of the ideal of personal liberty."

Snow and Anstar remained silent, and for a moment Vickery gazed down at them, smiling a cruel and scornful smile. Then, utterly in control of the scene, he relieved them of their shoes and radios, and Anstar of his weapon, all of which he tossed into a convenient pool. Any idea of a concerted assault which Anstar might have had he was forced to abandon in view of the stupor of despair into which Snow appeared to have fallen. Vickery backed over to the copter, vaulted in, gave the Galno salute, and was off, climbing steeply into the clear cold sky.

"PRETTY good," said Anstar. "To walk in, get what he wanted, tell us he's done so, and walk out, practically without violence. And most of it my fault."

"What are you going to do?" asked Snow. That dreary hopelessness which had been missing from his tone for some days had returned.

"Fetch up Dracon's shoes—a minor oversight of Vickery's—and cross the swamp at once. At least I can deal with that bomb of his."

"Will you manage to cross in the dark?"

"Oh yes. There's another Westing in the cave, and I've a lamp. It'll be nasty but not dangerous. But Vickery and his dupes will have left long

before I get there. I'll come for you as soon as I can—we must, of course, have a meeting."

They descended into the cave, where the Predictor screen was still showing a peaceful sunlit scene, at which Snow gazed apathetically while Anstar told Dracon of the latest events.

At the end Snow said, "It's almost worse this way round—knowing the future's deteriorating momentarily, and seeing that."

"I know," said Anstar. "All it means, of course, is that the attack is to be postponed. I don't want to set it farther ahead and make sure, though. It's a Cassandra amongst instruments."

He picked up the shoes, the gun, and a lamp, waved a hand at the other two, and disappeared up the passage to contend with the noisome mysteries of the night-shrouded swamp.

ONCE again Anstar took the chair at the head of the conference-table. "This is an emergency meeting," he said. "We can't wait for election of someone to take Merrill's place; we've a crisis on our hands, and one which is largely my fault. I therefore propose to tell you of my actions in the matter of Vickery, and then offer my resignation."

Amber gave a little cry of protest, seconded by a murmur from the others.

"The fact of the matter is," went on Anstar, "that even before Vickery landed, I was reasonably certain that he was a spy. As Dracon said at one stage, it was stretching coincidence too far to think otherwise. So I set up—or rather, Amber did—recording apparatus to determine whether he was using atomite as a rocket-fuel. For it seemed to me that if he were come with the One's personal blessing, he'd have either a rocket-fuel that didn't explode in a Snowbeam, or neutronium sheathing, or both. Well, I've had time to examine the spectrograms at last, and they show clearly that it wasn't atomite. It was heavily disguised with potassium and other things, but it's clear it's quite a new type of atomic explosive, stable to all particulate beams but detonated by X-rays of certain wave-lengths, or so I deduce—and all credit to the One's atomists for developing it. I suspected something of the kind from the colour of the blast. The ship gave a reflection-photograph of neutronium, but I'm pretty sure that was nothing but paint."

"But, Anstar," broke in Amber, "then what was all that about a new neutronium-piercing beam and your blowing up the ship?"

"I'm coming to that. I reasoned that if they were using a new explosive, they'd time-bomb their own ship to make sure we didn't get hold of it. So the explosion of the ship confirmed my presumption that Vickery was a spy."

"You never blew it up at all!"

Anstar nodded gravely. "All I did was to have the field evacuated—a thing I nearly forgot to do, incidentally—and tell one of the Snowbeam posts to own up to something they not only hadn't done, but couldn't do. That was the first step in my build-up of our non-existent neutronium-piercing Secret Weapon."

"But he'd the best of reasons for knowing that any weapon of ours hadn't destroyed his ship," put in Dracon.

"True. But there are coincidences. He couldn't be *sure*. And he'd no way of knowing the capacity of our weapon; one which could penetrate neutronium could very likely detonate his 'safe' propellant. Anyway, in

his gratitude at being presented with a perfect let-off for the explosion—though he must have had some explanation prepared—and in his excitement at the hint I carelessly let fall about our super-beam (I commented on his apparent neutronium sheathing), he overlooked any inconsistency. I should, of course, have had all this cut and dried and discussed before he landed. Only when he was down did I realise that he'd certainly have long-range spying devices, which he must be allowed to use. Actually he was a mass of vitally built-in gadgets and listened to much of our talk, though not, I'm sure, as much as he claimed—otherwise he'd almost certainly have realised there was something fishy about the Secret Weapon; he'd have known we were on the island to-day. But I . . . I think I could have risked telling you more, in the shielded places—and I took too much on myself. Hence our present position."

"Perhaps I'm stupid," said Dracon, "but I don't see why we had to let him spy. As things have turned out, surely it would have been better to lock him up and have done with it."

"Don't you see, Dracon," said Anstar earnestly, "that our one chance was to *use* him? You yourself suggested the possibility. Unless we could persuade him that we'd a weapon which would explode neutronium-shielded Black Cross, their attack, which was nearly ready, would have been put into operation—and succeeded. The Predictor agreed with me there, for what *that's* worth . . ."

"Yes," said Dracon, "you were right, of course. And I'm glad I wasn't trying to handle it."

"MY gross error," went on Anstar, unheeding, "was to forget, in the provision of a non-existent super-weapon, that we'd a *real* one. That the D, though safely hidden, could be got at through Merrill by someone sufficiently plausible, unscrupulous—and well-informed. And Merrill through Selene. Even Selene's get-together with Vickery didn't suggest that to me. So we can expect the Galnos' revised attack to include the D. It would appeal to their idea of retribution; and we couldn't deal with it if we *had* the super-beam."

"But at least, Anstar," said Dracon, "you achieved your object—to get their attack postponed. And since in any case we couldn't hope to withstand a direct attack, it doesn't seem to me to matter much that its frightfulness will be increased. Don't talk of resignation. We need you more than ever. We must use the time you've gained us to the best advantage."

Amber nodded emphatically. "I think you were right to keep it all to yourself," she said. "None of the rest of us really believed he was a spy; there'd have been a fearful risk of careless talk."

Anstar smiled. "Well, I'd like to carry on," he said. "But there's terribly little room for mistakes now. You mustn't let me get too autocratic or self-reliant." He paused, and then said, "There's something we could still do—turn a Snowbeam on their ship. It's neutronium-sheathed, but a lucky orientation might destroy it, because the rocket-jets weren't baffled. Vickery won't be worrying: he'll think we're still on the island, and things at a standstill. And he won't have transmitted any details about D to Earth, because he's got to string Merrill along and get all he can out of him. There's

an hour or two yet before they're out of range. But it's a slim chance—and it would mean the sacrifice of Selene and Merrill, if it came off."

"We can't do it," said Amber.

"We can't," said Snow, adding almost inaudibly, "the Phrynx . . ." He slumped forward onto the table and lay still.

"Snow!" burst out Amber. "Oh, this is awful—everyone's . . ."

"It's all right," said Dracon, at Snow's side. "He's only fainted. He's been a little queer for the last day or two, I've thought."

"Poor old Snow," Anstar said gently. "He's had a terrible time since Vara's been ill. In a way, he's been carrying her troubles as well as his own. Try and give him a little wine, Dracon."

Suddenly Snow opened his eyes and sat up. "I . . . I'm sorry," he said. "I . . . the truth is, I haven't been myself—literally—these last weeks. There has been a voice inside my mind, saying things . . . making things simple and even beautiful . . . and then yesterday, when it suddenly stopped, I could hardly carry on . . ." He got uncertainly to his feet. "I must go," he said more firmly. "I must go to Vara."

The door shut behind him.

"Well, I hate to say it," said Dracon, "but it looks to me as if things have been a bit too much for Snow. And that there's still another vacancy to fill on this Executive."

"Oh, *no!*" said Amber vehemently. "He's just overtired and terribly worried about Vara and everything—don't you think so, Anstar?"

Anstar was looking deeply perplexed. "I don't know that I agree with either of you," he said slowly. "The fact is, that Snow's been almost supernatural just lately, after being fearfully depressed for a long time—he's shown a sort of angelic detachment. I think this is the reaction. He had some kind of inner conviction that we would succeed, even if Vara didn't recover. Now he hasn't even that conviction to sustain him. So," his voice broke, "he goes back to Vara."

"And what then?" asked Amber with a half-sob.

Anstar shook his head. "Fairleth will help him all she can. I don't think there's anything we can do, except get on with the meeting, down to half-strength as we are."

"There's one important thing," said Dracon. "Have you any idea whether Vickery knows about the Predictor?"

"I'm pretty certain he doesn't," said Anstar. "He thought the super-beam was hidden in the cave. And as far as I know, all of our conversations about the Predictor were shielded."

"Then really it seems to me there's been more profit than loss on his visit. After all, we can probably develop their new explosive, from the spectrograms, if it's any use to us."

"But think of poor Selene and Merrill," said Amber. "When they find out what they've done, what's in store for them!"

"I know," said Anstar. "And it's not as if they were true traitors—they've only been desperately misguided. But look, Dracon, time is everything now. How many thought-projectors will we need, and how long will it take to build them—to disorganise the Galno attack? With or without D, it won't be longer than a few months."

"I've very little data on the only complete one yet. But so far, everything

suggests that we'll need a great many, perhaps even one per head of our population. And synchronisation's going to be very difficult. The power depends on the size of the crystal, and all our crystals are small, though there are plenty of them. But we can't spare the time to try and grow a huge one. We're so very likely to fail."

"How effective is the one you've made?"

"With a single operator, it'll control a small group of people as long as they're fairly close together, and the operator's concentration doesn't fail. But you can see the difficulties of operating on a planetary scale."

"Yes. We haven't time to train the people either in the production or the operation of the number required. If only we could stop the D from falling into their hands—it's obviously their quickest way to victory, and an extra month might turn the scales. But as it is, it seems to me we're doomed. The Phrynx have lost their gamble. Our victory in the summer was the merest irony." Anstar sat silent, staring before him.

AMBER walked round to him and put an arm about his shoulders. "Don't feel too badly about it, darling," she said. "No one could have done better."

"Oh yes they could," Anstar said grimly. "They could have discussed it in advance, warned Selene, foreseen the obvious danger—good heavens!" He started up suddenly, nearly knocking Amber over. "Amber dear, I'm sorry—didn't mean to bang into you . . ."

"Oh quick, Anstar, don't stop to be polite! You've thought of something, haven't you?"

"Yes—idiots that we are! The one projector that Dracon's built may not be enough to hypnotise Earth, but it ought to bring back Vickery—and the D!"

Dracon was already on his feet, his spirits restored at the prospect of action. "What do I do?" he said.

"The first thing to do is to bring him back, then, when he's thoroughly under control, we can decide what further messages, if any, he must send to cause the maximum delay of their attack. Take one of the psychologists, Dracon—Ethandine will be best, he's met Vickery—give him the full facts and let him handle the three of them. It'll be quite a subtle problem . . ." He broke off, smiling. "There's a working chance," he said. "We can bring him back. Can we use the time we gain to turn defeat into victory?"

Dracon, already half-way out of the room, cheerfully waved a hand. A few moments later, they heard the purr of the motor as his copter took off.

"Oh, Anstar, so things are all right after all!" Amber was radiant.

"Not so fast, darling, if you don't expect the best, it's better when it comes. And all we can really say is that we're a little better off than before Vickery landed."

"Much better off—except for poor Snow—we've a new explosive, a thought-transmitter, we've persuaded them to postpone their attack, we're getting the D back . . ."

Anstar was smiling. "I must say, it does sound better!"

"Let's go down to the control-room and trace the ship, so we know the minute it turns round. I couldn't sit still up here!"

As they went downstairs, Amber added irrepressibly, "And we've got

the Predictor, simply telling us we're going to win—or at least, I'm sure it will!"

Anstar snorted. "The first thing I'm going to get Dracon to do when we've got Vickery safe is to dismantle that damned Predictor. It isn't merely useless, it's a liability. I haven't had a moment free from uncertainty since it was set up!"

WHEN Snow reached his borrowed villa it was nearly dark. After all the stress and activity and strangeness of the last few days, his mind felt numb. It was a mere physical instrument, informing him that he was horribly tired, hungry, and aching in every limb. He walked mechanically but sure-footedly up the steeply-angled path leading to the wide glass door, from which no light came. The room within was in darkness, but from upstairs came a vague glow, and he hesitated, his emotion waking once more to pain. Should he crucify himself again? Why, indeed, had he come at all? A fresh surge of nostalgic misery swept over him, a glimpse of some exalted state of being which had been briefly his. From whence had they come, these thoughts, impulses, states of mind?

As he paused, there was a light step on the stair, and Fairleth came down from Vara's room.

"Snow? I'm glad you've come. There's been some change. She's deeply asleep, quite different from the fitful sleep she's been having. Although it's good from the point of view of rest, I don't like it—it's too deep."

"Be frank. You think she'll never wake?"

Fairleth nodded, his face a pale oval in the darkness. "She may stay like this for days. But I'm not sure she has the strength to pull out of it."

Snow stood motionless, while a medley of images and impulses flashed through his mind. An unbearably poignant memory of Vara as a little girl, sitting on a rock overlooking a pool in which other children were swimming, gravely watching them. Hundreds of other remembered flashes of her grace and loveliness. The impulse to rush upstairs, shake her, rouse her in spite of herself, tell her that victory was near, anything to wake her, however false. He became aware that Fairleth had taken his hand, was urging him towards a dimly-seen chair.

"Dear Snow," she said, "you're fearfully tired and so am I—I may be being quite unnecessarily pessimistic. I'm going to get a little sleep now, and if I were you I'd try to too. We can do nothing for the moment."

Snow relaxed into the chair, thankful that after all no immediate decision was called for. In a moment he was asleep.

When he awoke, the room was patterned with brilliant blue moonlight, which magicked the landscape outside into a fairyland, silver-laked, so enchanting that for an instant after waking Snow completely forgot himself in its loveliness. Then memory stabbed, and he realised that he was stiff and very cold, and utterly forlorn. Cold and remote, the Blue Moon gazed down at him.

But what were these twin smaller moons, low upon the horizon? No—not moons, for they were close—they were just outside the door! He started to his feet, made an uncertain forward movement. And paused, as a gentle musical voice spoke within his mind.

"Be not afraid, Snow. I am of the Phrynx, of whom you know."

Snow stood frozen with wonder, while the beginnings of a mighty flood

of relief came to him. The Phrynx alive still! And those mental voices, those exalted states of mind, a reality and not an incipient madness! Abruptly he flung open the door and stepped out to meet the creature whose very existence was a negation of much of his despair.

"I am called . . ." The name that followed was no word, no string of uncouth syllables, but a little tune which matched perfectly the unspoken voice. Snow's thoughts were chaotic, a medley of questions which were answered even before they crystallised, while he gazed, still half-unbelievingly, at the silver-furred, violet-eyed larged-eared creature who squatted before him.

"For four centuries we have slept—perceptively—upon the Blue Moon . . . we took care your people should never think of exploring it . . . when the crisis began we awoke . . . our instruments told us that at this stage *you* would be the deciding factor, but the balance would be very delicate. We found that your personal despair was affecting your judgment, and decided that for a short time we must support your mind, though the decisions must remain your own . . . and now—" the voice took on a greater clarity and decision—"your dear Vara's mind is ill, and I have come to cure her—by your leave?"

Still Snow could not speak, but the almost intolerable surge of joy that shook him was answer enough. Quietly the Phrynx stepped past him into the dim room. His tail brushed Snow's hand, curling about it for an instant.

The moon climbed up the sky, and Snow still stood, rapt in happiness.

THE END

NEW WORLDS

If you were one of the unfortunates who missed the fourth issue of this fascinating book there is still time to obtain a copy, price 1/6 post free, direct from the Publisher.

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Progress

WITH this fifth issue of *New Worlds* we are pleased to announce an increase in the number of pages over the last issue, bringing the book up to 96. This means we can get in more wordage, which may possibly be used in later issues for special departments. It has been made possible through the overwhelming enthusiasm readers of the last issue showed for this somewhat irregular (as yet), collection of stories dealing with interplanetary travel and other futuristic themes.

I had no doubts at all that the book would be well received by a reader audience which has been asking so long for a British effort of its own, but even my optimism has been surpassed. But that does not mean we can become complacent at this early stage. We have only made a bare beginning upon the many ideas you readers and ourselves want to see within the pages of *New Worlds*. To further that aim I ask you to go on spreading the news of the book's existence amongst your friends and colleagues, as well as writing in regularly with your pet likes and dislikes. Especially I request you to vote on your story preference for the whole of this issue, so that we may obtain a greater average for the results in the Literary Line-up. Only by knowing more accurately our readers' story preference can we mould the contents to the desires of the majority.

Especially, order your copy of *New Worlds* regularly from your newsagent or bookstall. If he doesn't stock it he will have no difficulty in obtaining supplies from ourselves.

Many readers have written to ask if they can take out subscriptions for *New Worlds* and we are pleased to announce that this can now be done. Send 6s. 6d. (\$1.50 in Canada and U.S.A.), to Nova Publications Ltd. for four issues, stating the issue you wish your subscription to commence.

IN THIS issue we introduce two more artists. Turner is an old hand at fantasy art, having been illustrating for several science fiction books in 1938-39. Clothier is entirely new to the medium, but he has a natural flair for the futuristic. I hope we see more from both of them in succeeding issues. Fantasy art work is a highly specialised technique—as specialised as the art of writing science fiction. It doesn't follow that a good artist or author in the general field will make his mark in the fantasy field should he turn to it. In fact, many of them shun the fantasy field because it involves harder work than in the normal fiction mediums. Therefore, when we do find that happy compromise of artist or author, we hope they will be encouraged by your reactions as well as our blessings.

THE next issue of *New Worlds* should be available early in 1950. We would like it to be in January, but at this stage we cannot determine exactly. Thereafter we shall try to produce four issues a year.

Make sure you don't miss any of them.

JOHN CARNELL

THE FORGOTTEN ENEMY

By ARTHUR C. CLARKE

Man had fought many battles, but there was one enemy he had forgotten about entirely . . .

Illustrated by CLOTHIER

THE thick furs thudded softly to the ground as Professor Millward jerked himself upright on the narrow bed. This time, he was sure, it had been no dream: the freezing air that rasped against his lungs still seemed to echo with the sound that had come crashing out of the night.

He gathered the furs around his shoulders and listened intently. All was quiet again: from the narrow windows on the western wall long shafts of moonlight played upon the endless rows of books, as they slanted upon the dead city beneath. The world was utterly still: even in the old days the city would have been silent on such a night, and it was doubly silent now.

Wearily Professor Millward shuffled out of bed, and doled a few lumps of coke into the glowing brazier. Then he made his way slowly towards the nearest window, pausing now and then to rest his hand lovingly on the volumes he had guarded all these years.

He shielded his eyes from the brilliant moonlight and peered out into the night. The sky was cloudless: the sound he had heard had not been thunder, whatever it might have been. It had come from the north, and even as he waited it came again.

Distance had softened it, distance and the bulk of the hills that lay beyond London. It did not race across the sky with the wantonness of thunder, but seemed to come from a single point far to the north. It was like no natural sound that he had ever heard, and for a moment he dared to hope again.

Only Man, he was sure, could have made such a sound. Perhaps the dream that had kept him here among these treasures of civilisation for more than twenty years would soon be a dream no longer. Men were returning to England, blasting their way through the ice and snow with the weapons that science had given them before the coming of the Dust. It was strange that they should come by land, and from the north, but he thrust aside any thoughts that would quench the newly-kindled flame of hope.

THREE hundred feet below, the broken sea of snow-covered roofs lay bathed in the bitter moonlight. Miles away the tall stacks of Battersea Power Station glimmered like thin white ghosts against the night sky. Now that the dome of St. Paul's had collapsed beneath the weight of snow, they alone challenged his supremacy.

Professor Millward walked slowly back along the bookshelves, thinking over the plan that had formed in his mind. Twenty years ago he had watched the last helicopters climbing heavily out of Regent's Park, their rotors churning the ceaselessly falling snow. Even then, when the silence had closed around him, he could not bring himself to believe that the North had been abandoned forever. Yet already he had waited a whole generation, among the books to which he had dedicated his life.



In those early days he had sometimes heard, over the radio which was his only contact with the South, of the struggle to colonise the new temperate lands of the Equator. He did not know the outcome of that far-off battle, fought with desperate skill in the dying jungles and across deserts that had already felt the first touch of snow. Perhaps it had failed: the radio had been silent now for fifteen years or more. Yet if men and machines were indeed returning from the North—of all directions—he might again be able to hear their voices as they spoke to one another and to the lands from which they had come.

PROFESSOR MILLWARD left the University building perhaps a dozen times a year, and then only through sheer necessity. Over the past two decades he had collected everything he needed from the shops in the Bloomsbury area, for in the final exodus vast supplies of stock had been left behind through lack of transport. In many ways, indeed, his life could be called luxurious: certainly no professor of English literature had even been clothed in such expensive garments as those he had taken from an Oxford Street furriers.

The sun was blazing from a cloudless sky as he shouldered his pack and unlocked the massive gates. Even ten years ago packs of starving dogs had hunted in this area and though he had seen none for years he was still cautious and always carried a revolver when he went into the open.

The sunlight was so brilliant that the reflected glare hurt his eyes: but it was almost wholly lacking in heat. Although the belt of cosmic dust through which the Solar System was now passing had made little visible difference to the sun's brightness, it had robbed it of all strength. No-one knew whether the world would swim out into the warmth again in ten or a thousand years, and civilisation had fled southwards in search of lands where the word 'summer' was not an empty mockery.

The latest drifts had packed hard and Professor Millward had little difficulty in making the journey to Tottenham Court Road. Sometimes it had taken him hours of floundering through the snow and one year he had been sealed in his great concrete watch-tower for nine months on end.

He kept away from the houses with their dangerous burdens of snow and their Damoclean icicles, and went north until he came to the shop he was seeking. The words above the shattered windows were still bright and clear: "Thos. Jenkins & Sons. Radio and Electrical. Television a Speciality".

Some snow had drifted through a broken section of roofing, but the little upstairs room had not altered since his last visit a dozen years ago. The all-wave radio still stood on the table, and empty tins scattered on the floor spoke mutely of the lonely hours he had spent here before all hope had died. He wondered if he must go through the same ordeal again.

Professor Millward brushed the snow from the copy of "The Amateur Radio Handbook for 1955," which had taught him what little he knew about wireless. The test-meters and batteries were still lying in their half-remembered places, and to his relief some of the batteries still held their charge. He searched through the stock until he had built up the necessary power supplies, and checked the radio as well as he could. Then he was ready.

It was a pity that he could never send the manufacturers the testimonial they deserved. The faint "hiss" from the speaker brought back memories of the B.B.C., of the nine o'clock news and symphony concerts, of all the things he had taken for granted in a world that was gone like a dream. With scarcely controlled impatience he ran across the wavebands, but everywhere there was nothing save that omnipresent hiss. That was disappointing, but no more: he remembered that the real test would come at night. In the meantime he would forage among the surrounding shops for anything that might be useful.

IT was dusk when he returned to the little room. A hundred miles above his head, tenuous and invisible, the Heaviside Layer would be expanding outwards towards the stars as the sun went down. So it had done every evening for millions of years, and for half a century only Man had used it for his own purposes, to reflect around the world his messages of hate or peace, to echo with trivialities or to sound with the music that had once been called immortal.

Slowly, with infinite patience, Professor Millward began to traverse the short-wave bands that a generation ago had been a babel of shouting voices and stabbing morse. Even as he listened, the faint hope he had dared to cherish began to fade within him. The city itself was no more silent than the once crowded oceans of ether. Only the faint crackle of thunderstorms half the world away broke the intolerable stillness. Man had abandoned his latest conquest.

Soon after midnight the batteries faded out. Professor Millward did not have the heart to search for more, but curled up in his furs and fell into a troubled sleep. He got what consolation he could from the thought that, if he had not proved his theory, at least he had not disproved it either.

The heatless sunlight was flooding the lonely white road when he began the homeward journey. He was very tired, for he had slept little and his sleep had been broken by the recurring fantasy of rescue.

The silence was suddenly broken by the distant thunder that came rolling

over the white roofs. It came—there could be no doubt now—from beyond the northern hills that had once been London's playground. From the buildings on either side little avalanches of snow went swishing out into the wide street: then the silence returned.

Professor Millward stood motionless, weighing, considering, analysing. The sound had been too long-drawn to be an ordinary explosion: perhaps—he was dreaming again—it was nothing less than the distant thunder of an atomic bomb, burning and blasting away the snow a million tons at a time. His hopes revived, and the disappointments of the night began to fade.

That momentary pause almost cost him his life. Out of a side-street something huge and white moved suddenly into his field of vision. For a moment his mind refused to accept the reality of what he saw: then the paralysis left him and he fumbled desperately for his futile revolver. Padding towards him across the snow, swinging its head from side to side with a hypnotic, serpentine motion, was a polar bear.

He dropped his belongings and ran, floundering over the snow towards the nearest buildings. Providentially, the Underground entrance was only fifty feet away. The steel grille was closed, but he remembered breaking the lock many years ago. The temptation to look back was almost intolerable, for he could hear nothing to tell how near his pursuer was.

For one frightful moment the iron lattice resisted his numbed fingers. Then it yielded reluctantly and he forced his way through the narrow opening.

Out of his childhood there came a sudden, incongruous memory of an albino ferret he had once seen weaving its body ceaselessly across the wire netting of its cage. There was the same reptile grace in the monstrous shape almost twice as high as a man, that reared itself in baffled fury against the grille. The metal bowed but did not yield beneath the pressure: then the bear dropped to the ground, grunted softly, and padded away. It slashed once or twice at the fallen haversack, scattering a few tins of food into the snow, and vanished as silently as it had come.

A VERY shaken Professor Millward reached the University three hours later, after moving in short bounds from one refuge to the next. After all these years he was no longer alone in the city. He wondered if there were other visitors, and that same night he knew the answer. Just before dawn he heard, quite distinctly, the cry of a wolf from somewhere in the direction of Hyde Park.

By the end of the week he knew that the animals of the North were on the move. Once he saw a reindeer running southwards, pursued by a pack of silent wolves, and sometimes in the night there were sounds of deadly conflict. He was amazed that so much life still existed in the white wilderness between London and the Pole. Now something was driving it southwards, and the knowledge brought him a mounting excitement. He did not believe that these fierce survivors would flee from anything save Man.

The strain of waiting was beginning to affect Professor Millward's mind, and for hours he would sit in the cold sunlight, his furs wrapped around him, dreaming of rescue and thinking of the ways in which men might be returning to England. Perhaps an expedition had come from North America across the Atlantic ice: it might have been years upon its way. But why had it come so far north? His favourite theory was that the Atlantic ice-packs were

not safe enough for heavy traffic further to the south.

One thing, however, he could not explain to his satisfaction. There had been no air reconnaissance, and it was hard to believe that the art of flight had been lost in so short a time.

Sometimes he would walk along the ranks of books, whispering now and then to a well-loved volume. There were books here that he had not dared to open for years, they reminded him so poignantly of the past. But now, as the days grew longer and brighter, he would sometimes take down a volume of poetry and reread his old favourites. Then he would go to the tall windows and shout the magic words over the rooftops, as if they would break the spell that had gripped the world.

It was warmer now, as if the ghosts of lost summers had returned to haunt the land. For whole days the temperature rose above freezing, while in many places flowers were breaking through the snow. Whatever was approaching from the north was nearer, and several times a day that enigmatic roar would go thundering over the city, sending the snow sliding upon a thousand roofs. There were strange, grinding undertones that Professor Millward found baffling and even ominous. At times it was almost as if he were listening to the clash of mighty armies, and sometimes a mad but dreadful thought came into his mind and would not be dismissed. Often he would wake in the night and imagine he heard the sound of mountains moving to the sea.

SO the summer wore away, and as the sound of that distant battle drew steadily nearer Professor Millward was the prey of ever more violently alternating hopes and fears. Although he saw no more wolves or bears—they seemed to have fled southwards—he did not risk leaving the safety of his fortress. Every morning he would climb to the highest window of the tower and search the northern horizon with field-glasses. But all he ever saw was the stubborn retreat of the snows above Hampstead, as they fought their bitter rearguard action against the sun.

His vigil ended with the last days of the brief summer. The grinding thunder in the night had been nearer than ever before, but there was still nothing to hint at its real distance from the city. Professor Millward felt no premonition as he climbed to the narrow window and raised his binoculars to the northern sky.

As a watcher from the walls of some threatened fortress might have seen the first sunlight glinting on the spears of an advancing army, so in that moment Professor Millward knew the truth. The air was crystal clear, and the hills were sharp and brilliant against the cold blue of the sky. They had lost almost all their snow: once he would have rejoiced at that, but it meant nothing now.

Overnight, the enemy he had forgotten had conquered the last defences and was preparing for the final onslaught. As he saw that deadly glitter along the crest of the doomed hills, Professor Millward understood at last the sound he had heard advancing for so many months. It was little wonder he had dreamed of mountains on the march.

Out of the North, their ancient home, returning in triumph to the lands they had once possessed, the glaciers had come again.

THE END

THE LITERARY LINE-UP

IT HAS taken us a long time to officially announce that the trilogy of stories by John K. Aiken ("Cassandra" in this issue is the second part), is in reality a long novel, and because of our somewhat infrequent appearance we had to split it into three separate parts instead of making a serial of the story. "Cassandra" ends so inconclusively in this issue that we have decided to put the concluding story "Phoenix' Nest" in the next issue. This final story is one which will long be remembered by readers and the entire trilogy bids fair to become a minor classic of British science fiction.

Backing that will be another Chandler story "Coefficient X," which again has magnetic bearings as its theme, but with considerable difference to his highly successful story in the last issue.

Of the other stories little can be said at the moment, but we are gathering more material by new authors as well as stories by such favourites as William F. Temple, F. G. Rayer, A. Bertram Chandler and others. And John Brody is working on a sequel to "World In Shadow," which is shaping up nicely.

TO THE many hundreds of readers who sent in their opinions and story-rating on the last issue we are deeply indebted and we hope that many more of you will send us your opinion of this current issue. Even though some readers were caustically critical most had constructive suggestions to make and all these are carefully considered, even though it may not be possible to put many of them into practise. We do appreciate all criticisms, so don't hesitate to let us know your pet gripe—and anything especially praiseworthy won't exactly make us swollen-headed.

The story rating for the fourth issue was very close between the 2nd and tied 4th positions, but Chandler's story was way out in front entirely alone.

1. Position Line	..	..	..	A. Bertram Chandler
2. World In Shadow	..	..	..	John Brody
3. Edge Of Night	..	..	..	John K. Aiken
4. The Cireesians	..	..	..	Norman Lazenby
The Rebels	..	..	..	E. R. James

* * * *

Readers are informed that if they experience any difficulty in obtaining future issues of *New Worlds* they may take out a four-issue subscription for 6s. 6d. post free (\$1.50 in Canada and U.S.A.) by writing direct to the Publisher.

UNKNOWN QUANTITY

By PETER PHILLIPS

Obviously, a robot couldn't have a soul, even though it could do most things better than a human. But there was something . . .

Illustrated by CLOTHIER

“ . . . AND I say to you that this Breath of Life is a holy thing, and that they who sin against it will receive the judgement of the true Maker of All Things, unknowable, invisible and potent. His wrath shall be on their heads who presume to defile his greatest gift, who cannot create but only subvert and warp and wrench asunder, who are as blind, idiot children that mock their parents in play. For Life without Soul is without blessing; and Flesh without the Spirit is an abomination”

You could hear the capitals.

Macho flipped off the audio, leaving the automatic transcriber still running, and swore slowly.

The young man sitting at the opposite side of his desk smiled, shook his head. “Not so, Mr. Macho. The man's good. Elizabethan blood and thunder, rounded periods, phrasing, vocabulary, cadences—perfect. Intensive study of semantics and rhetoric.”

“It's blasphemous.”

“How? The translators of the Authorised Version of the Bible didn't get a lien on the language. There was a gentleman named Shakespeare, remember.”

Macho chewed air. “We must get him on something. Sales are down ten per cent. and still slipping.”

“What's Bertie's final word?”

Macho fingered the terse, thousand-word report of company lawyer Bertram Makepeace, skittered it off his desk with impatient contempt.

“Says we can't touch him. The International Pandect is explicit. Freedom of speech and worship, full access to all means of disseminating opinion. The Limitations Statute gives protection against rivals or misrepresentation. But he's not a rival. He's just a nut.”

“Misrepresentation then——”

“How? He doesn't say that Servotrons are lazy or inefficient or that they smell, or eat the baby, or draw rude pictures on the wall. He just says they have no soul!”

“One would scarcely imagine that that is a drawback in this enlightened age,” the young man murmured, blue eyes wide and innocent.

Macho regarded him suspiciously. It was often difficult to decide whether Johannes Hensen was being perfectly sincere or vastly cynical. Perhaps that was why he was one of the best—and youngest—men in publicity.

Macho decided he was being cynical. “Funny man . . . It happens it is a drawback, the way The Preacher puts it over. People haven't heard that sort of thing since the big revivals in the 'Sixties. They're lapping it up. And not buying Servotrons.”

He placed a stubby forefinger dead centre on his desk-pad. “It's your job to sell 'em. Do it.”

Hensen got up. “I'll slip over to Assembly right away.”



"What in hell for?"

The young man displayed a smile of cherubic confidence as he paused at the door. "Simple, Mr. Macho. I'll get them to slip in a soul on the last stage."

BUT Hensen, as he made his way to his own self-contained suite of offices and studios in the squat Servotron-National administration building on the outskirts of the square half-mile of factories, let the smile slip from his face.

It was bad. S.-N. stock, good-as-gilts for five years, was on the way down. This latest radio ranting of The Preacher would take off a few more points.

What had the man got? Money, to begin with. He bought air-time, vision-time—his lean, hard-planed face, his shock of black hair and burning eyes televised well—full-page ads., leaflet give-aways by the heedless million.

A voice. A rich, stirring voice, with every modulation in place, every inflexion tested for full emotional value: hard in warning, trembling in exhortation, calm and incisive in a logic that could not be assailed because it was not based on scientific postulates, but on premises that could not in themselves be questioned.

Existence of a soul, for instance.

UNKNOWN QUANTITY

Fine, you'd say. Show us the soul the Servotron hasn't got. Hold it up, turn it over, give its mass, density, molecular pattern—and we'll see what we can do about fabricating one.

"1992 model Servotron. Soul installed at no extra cost."

But they're machines, brother. They're just as much machines as they were fifteen years ago, before Solipson got controlled cell-growth around Merifree's neural complex. The electronic control is the same. They're humanoid, not human. Flesh instead of metal—but not living flesh. You can grow the same stuff out of chicken tissue in your back kitchen if you know how. They only feel what they're conditioned to feel, for functional purposes—

Hensen's lips were moving unconsciously as he continued the imaginary argument.

Certainly we give them three arms. Or four arms. They're extensions of a machine, not limbs. Servotron copter-pilots can do with all of them in city traffic—and with the eye back of their heads. They've got more reaction factors than the automatic pilots manufactured back in the 'Forties. But they're merely a development of the same principles. We could shove the whole thing right back in a tin box for that matter. But we've got human nature to deal with. Passengers don't like to give orders to tin boxes. They don't feel safe with just a buzzing box between them and a smash-up in a sky full of traffic.

But give them a gadget that moves and talks, that has four very competent hands and three eyes—and they'll sit back and relax.

Ugly? Ugliness is in the eye of the beholder. A purely functional machine can never be truly ugly, even from the aesthetic point of view. And have you seen our new Servotron pony for kids? It's based on a design by Max Moulton, the top sculptor in this hemisphere—and it's beautiful. . . .

Hensen back-heeled the door of his office and slumped in his chair, even forgetting in the concentration of the moment to ease the creases in his trousers. Which was unusual. He paid high prices for his clothes, carried them well.

The Preacher was beating him at his own game. Publicity. He'd grabbed the ear of the public. How? Not easy to answer. Appeal to religious feelings, to an abstract sense of justice—in part, perhaps.

BUT there was something more, something that sprang from the conditions of the age. People had money, security in a stable economy, comfort, leisure, entertainment . . . The Preacher had given them something new. Or something so old that it was new again. The voice crying in the wilderness. The lone wolf. The individual who had courage enough to shout down a great corporation for what he believed was right. One man against a million, crusading for a principle.

People were listening.

And talking.

Crank; Uh-huh. But you should hear him. The way he puts it over, all them long words sounding just right. You don't get speakers like that nowadays, much. Now if our local minister had a voice like that, he'd pack the church . . .

Oh, Mabel, doesn't it just make you feel you must do something about those poor soulless creatures . . .

Believe me, Alice, just as soon as I switched off, I turned to George and

said: "George, you can cancel the order for that new model chauffeur right away. I won't have one of those poor, tormented beings near my house," I said. . .

Slaves, he said . . .

Like Abraham Lincoln . . .

But, darling, he doesn't want them free, he doesn't want them made at all . . .

There's something to it, Harry. Give me the old-fashioned electronic type anyway. You could always cuss 'em or kick 'em when they didn't plough straight, and send for a mechanic. You knew they wouldn't answer back. But bawl these things out, and you get a goshawful feeling they should answer back, but they can't—like kicking a hound-dog, or a hired man who's deaf and dumb, if you get what I mean . . .

Sure they're useful, but . . .

If you want them to answer back, we'll make them to answer back. They'll do anything. But they aren't human. They aren't even animals. They're machines. Ministers and clergy of recognised religious bodies fully accept that. It's only this crank with money to burn who tells you differently. You don't even know his name, who or what he really is. Just—The Preacher. I tell you they're *machines*.

Hensen said the last word aloud, fiercely. For a publicity man, he was apt to get a little too dispirited at the refusal of human nature to become completely predictable. It was the age of reason. The Preacher had given them a little unreason, nicely wrapped up, and they were falling for it.

Hensen stabbed a desk button.

Theo glided in.

"What's the time, Theo?"

"Thirteen-three, sir."

"Do you have a soul, Theo?"

Silence.

"When did Camillus build the Temple of Concord?"

"In the year 366 B.C., sir."

"Have you a soul, Theo?"

More silence.

"Pawn to Q.4."

"Pawn to Q.4."

"Pawn to Q.B.4."

"Pawn to K.3."

"Same defence again, eh? . . . Do you have a soul?"

Still silence.

"Oh, go home!" Hensen snorted.

"Very good, sir."

"NO! Fetch me a coffee. Black and sweet."

Mnemonic patterns superimposed to order.

A walking filing cabinet, valet, chess-player, conversationalist and dilettante of the arts—apply the correct verbal stimuli and you'd get a variable discourse on anything from cave paintings to Dali.

Musician. Theo could play ten Beethoven sonatas with uncanny accuracy. And a complete lack of feeling and expression.

A soul might help at that, Hensen thought wryly. Mrs. Hensen refused to let Theo touch the piano in their apartment. A penny in an old-fashioned electric player-piano gave better music, she said.

But Theo was good. Give him the vocabulary, the voice, the aim—to sway listeners—and he could out-preach The Preacher.

Out-preach——

Hensen grabbed a phone. “Call the Brax Hotel, ask if The Preacher will see me.”

THE PREACHER’S direct and unwavering gaze was strangely disconcerting. Hensen held it for a while, then looked away with the feeling that his own eyes had been drawn out of focus.

The man sitting behind a small, simple desk, gave an impression of granitic solidity.

“*Cui bono . . . ?*” Hensen said.

“My dear young friend, I have excused your crass presumption in offering me what amounted to a bribe to cease my agitation against the evil products of your company; I have forgiven your lack of ability to comprehend the simplest tenets of moral philosophy; but I can tolerate no further imputations against my personal integrity. If it is beyond your ethical understanding that a man’s motives may be entirely altruistic, that he may serve the highest Truth with no thought of Self—save in that such a course may bring him nearer a state of Grace—then I pity you, my son. How empty your life must be! How little——”

“Stop it!” Hensen rudely interrupted the mellifluous flow. “Save the oratory for the customers.”

He was wearily aware that this trite discourtesy—unnatural in him—was the reaction of his ego to the suggestion of inferiority. Much more of The Preacher at full blast, and he’d either lose his temper completely or crawl out on hands and knees dragging a mutilated superiority complex behind him.

The man’s bland self-assurance was unshakeable. If it had sprung from mere self-righteousness, Hensen felt sure he could have pricked it. But The Preacher’s obvious sincerity had put him at a moral disadvantage from the beginning.

Hensen realised he’d got off on the wrong foot in making even the most circumlocutory offer of a bribe. He had intended it merely as an opening . . . ‘Naturally I did not believe for a moment that you would be interested in such an offer, but you will realise that in the circumstances when large sums are at stake, big corporations are inclined to think in terms of money . . . They insisted that the offer should be made, despite my protests . . . But at least, the air is now clear and I can be perfectly frank.’

That was to have been the gambit: gain his confidence, swap sincerity for sincerity, then lead up to a challenge.

But the man’s reaction had been so sharp, vehement—and exhaustive—that Hensen had been thrown on the defensive and The Preacher had given him no opportunity to revoke on the offer and regain his balance. Resentful at being preached at, embittered by the all-inclusive denunciation, Hensen had forgotten diplomacy and identified himself completely with Servotron-National. And he couldn’t even argue that he’d been driven into a false position. Perhaps that was what The Preacher had intended. He’d been outwitted. It hurt.

The Preacher turned the knife. “You are an egotistical young man and a boor withal. I think this discussion is best terminated before your unschooled

emotions impel you to more contemptibly worthy of a street hooligan."

Hensen swallowed hard, forced a smile.

"You're worthy of a better antagonist. Would you be prepared to maintain your position in public dispute——"

"——In the manner of the ancient Greeks . . .? Against a champion chosen by you . . .? My dear young fellow, I have been expecting such a challenge from the moment you entered this room."

"Then you accept?"

"Certainly. Bring forth your Devil's Advocate. Prime him with evil as you will, he shall not prevail."

"And meantime——"

"And meantime, my campaign will continue. Good-day, Mr. Hensen."

"PRIME" was the word.

"We'll prime him with the answer to every question—and more important, the question to every answer. Everything from Aristotle to Whitehead, from Aquinas to Bradlaugh, plus a course in the technique of disputation and oratory prepared by the best brains we can buy. We'll use every cent of this year's allocation for the publicity build-up, stage it in Vision City, get world-wide coverage. Then when The Preacher stands confounded amid his own disrupted arguments, Theo reveals himself as a Servotron. Collapse of The Preacher."

Macho looked from the enthusiastic Hensen to Seamas Hennessy, chief electronician, who shrugged. "Can do. No theoretical limit. Give me the stuff in mat formulation, and I'll pour it in."

"What shall we be trying to prove—that Theo has a soul?"

Hensen replied: "No. That would play right into his hands. 'Souls in bondage to alien flesh'—I can hear his come-back. He'd have us both ways. Our intention is to throw doubt on the whole concept of the soul as expounded by the man. To beat him at his own game, to leave the customers thinking: 'Maybe this thing *has* no soul. Maybe I have. And maybe I'd trade it in for the ability to talk and argue like that'. Once their confidence in The Preacher has been undermined in any degree, once they have seen his personality overshadowed by that of another being—even an artificial being—or because it's artificial—you'll get a complete swing-over. I know my dear public. In the final analysis, they'll always root for the winning side."

Macho said: "The Board have given me a free hand. I pass."

MR. COMO MAKIM, who was the next person after Hensen to interview The Preacher, came into the small office in The Preacher's hotel suite with no intention of indulging in word-play.

He closed the door carefully behind him, said: "Well?"

The Preacher rose from behind his desk, inclined his head gravely in greeting. "I did not recognise you for a moment."

"That's the idea." Mr. Como Makim fingered the false beard that covered his aggressive chin. "And say 'sir' when you address me."

"I beg your pardon—sir. May I be seated?"

Makim glared. He suspected sarcasm. "It's your damned room isn't it?"

"Only nominally, sir," The Preacher replied.

"I told you to forget things like that. You're doing a job and this is part of it. What happened?"

The Preacher sat down. His eyes, afire when he addressed his public, were now wide, mild. He related the details of the meeting with Johannes Hensen, and the challenge.

"When?"

"In four weeks, at Vision City."

Makim said: "Can you do it?"

"I feel quite confident, sir."

"You'll have to work like hell to get that stock down further before we make the killing. Put everything you've got into it these next four weeks."

"Assuredly, sir."

The door closed behind Makim. The Preacher said softly to the empty room: "What an unutterably coarse fellow. His modes of expression are invariably vulgar."

Makim hurried home. His false beard was beginning to irritate his skin. It was crazy, running around in a disguise at his age. But fellow-directors of Automata Corporation had insisted. There must be no breath of suspicion.

"SURELY it would defeat our purpose if I permit the doctrine of animism to be introduced? The argument is not that I, as a machine, possess a soul; but that, being capable of erudite disputation with a human creature of such a calibre as The Preacher, I do not stand in need of this immaterial organ, although, of course, in thus controverting the very basis of his preaching, I must take care not to offend religious susceptibilities."

Hensen leaned back, sighed happily.

"Beautiful, Theo, beautiful. You have answered my point instead of merely making a counter-assertion. Congratulations, Hennessy."

Seamas Hennessy said quietly: "Congratulate Theo, too. He's worked hard."

Hensen looked sharply at the electronician. The way he'd said that evoked a mental picture of Theo sitting up at night with an ice-pack on his head, poring over hundreds of volumes, soaking up philosophy, metaphysics and black coffee; instead of lying quiescent while Hennessy handled the controls of a fabulously complex machine that impressioned set mnemonic patterns on the Servotron's "brain".

Hennessy said: "You sell 'em—I make 'em. When you impress reasoning faculties, you come up against succeeding barriers—the critical points at which cells quit receiving, and you get surge-backs. The rise to the next potential level is a quantitative and qualitative jump. The first few barriers can be overcome by stepping up the input—but at some point the barriers cease to be purely electronic. They become partly psychological. They can still be cracked from outside, but it's much easier if the servo's co-operating——"

"Hold it. That implies an effort of will, and also that a servo could withhold co-operation deliberately."

"Not deliberately, but subconsciously."

"You mean by that time they've got a will and a subconscious?"

"To some extent. But not in a human sense. With them, the will is merely a function of purposiveness; and the subconscious is literally a subconscious—not the repository of resentments, fears, neuroses and shelved

memories that it is with us, but a lower level of consciousness induced in otherwise unimpressioned cells by some form of secondary effect. It acts as a resistance. It's a nuisance, and we're trying to obviate it. Meantime, the servo himself can help to overcome that resistance. So say 'thank-you' to Theo."

"I don't get it," Hensen said. "I'll stick to selling them. However, if you feel like a proud father, and it makes you happy—thank you, Theo. Congratulations. And may your batteries never run dry."

"Thank you, sir," said Theo. "I appreciate that."

"Amazing. You're capable of gratitude?"

"Possibly not in the true sense, sir. But since concepts involving the emotions as such, apart from intellect, play a large part in theology and in earlier philosophical systems, it was evidently thought desirable for purposes of the coming debate that my impressioning should take cognizance of them. I can therefore understand emotions, although, of course, I cannot experience them. Speaking of impressioning, sir, my early compulsives have not been superseded, so if you will pardon me——" Theo leaned down, straightened Hensen's crooked tie and flicked imaginary dust from his lapel.

"Would there be anything more, sir?"

"Yes. Coffee. Caffeine-plus." Hensen turned to Hennessy as Theo smoothly departed. "It's like telling Socrates off to do the chores. Could there be resentment?"

"No. But if it worries you to have a pedant as man-servant, we can decondition afterwards."

HENSEN shuddered. "Talk like that, and you'll get me cheering for The Preacher. 'What God hath given . . .' and so on. Maybe we should put them back into boxes if we can't give them a soul."

Hennessy scratched his iron-grey thatch. "Hnuh . . . And you're the one who's always insisted on their purely mechanical nature."

"There's a limit——"

"We haven't found it. I know what you mean, but that's not my province. I'm concerned with theoretical limits. But we're up against a double check in trying to find them. It's a field in which it's impossible to formulate data without practical experience. There are no postulates which will give us an answer. But the cost and size of the impressioning apparatus increases in proportion to the number and complexity of the mats we use—and at a hell of a rate. I've left the front office to figure out how many megabucks we've burnt in building the impressioner for Theo. But it'll shock them. And you. I'm grateful to you, incidentally, for the opportunity to take it this far——"

"Don't mention it. But surely at some point the servos will pick up the ability to learn from experience?"

"They can do that already to some extent. So can worms. But that's a different thing from the ability to absorb knowledge from visual or oral sources, and apply it. To get that over, we might have to build a machine the size of the planet. Or at least, one of a size and complexity that make it a technical and commercial impossibility. We don't know," said Hennessy, and finished up with a doleful Irishism: "And the hell of it is, we shan't know—until we've built it."

Hensen became aware that a big, firm-fleshed nerveless hand was extending a cup of coffee towards him.

"Thanks, Theo. You should serve Mr. Hennessy first."

"Mr. Hennessy, sir," said Theo, "does not take coffee."

A small bomb might have exploded under Seamas Hennessy's fundament. His chair fell backwards.

"Say that again!"

"I merely observed that you don't take coffee, sir."

"How did you know?"

Theo contrived to look both surprised and imperturbable. "You made some remark to that effect in the laboratory yesterday."

Hennessy closed his eyes and swayed gently.

"What the——" Hensen spilled some coffee.

"Don't you get it?" said Hennessy dreamily. "We stuff his noggin with the Principia Ethica, with comparative theology; we fill in the outlines of a thousand philosophical systems; we give him the answers to a million questions, and the counter-questions that go with them; we condition him to wriggle verbally when he doesn't know; we give him the voice of an angel, the oratory of a Demosthenes, the emoting ability of a stereo star; we tell him about epiphenomenalism, behaviorism, determinism, representationalism . . . We make him a walking dictionary . . .

"But there's one thing we don't tell him. We don't tell him that Seamas Hennessy, proud descendant of kings, prefers a slug of good Irish whisky to the coffee they serve up around these offices.

"No. He just happens to overhear it. Mr. Hennessy doesn't like coffee. So Mr. Hennessy doesn't get coffee. Something marked, learned and acted upon without impressioning, without instructions.

"And that simple fact," said Hennessy, "is far more significant in its implications than the ability to recite the Encyclopaedia Britannica backwards, or react fixedly to any conceivable combination of verbal stimuli in philosophical dispute."

"In other words," asked Hensen, "you've done it?"

"Yes. And how does that leave you with The Preacher?"

"Strengthens his arguments of course——Hey! Where're you going?"

Theo stopped at the door. "I beg your pardon, sir, but Mr. Hennessy expressed a preference for whisky——"

Hensen said: "Make it two."

PREACHER TAKES UP S.-N. CHALLENGE

S.-N. PUTS SHIRT ON CROSS-TALK

"DISPUTE IN MANNER OF ANCIENT GREEKS"

S.-N. CHAMP IS UNKNOWN

Headlines, puffs from feted columnists; stereo feature shorts; cut-ins on vision programmes; bill-boards with a picture of The Preacher versus a large interrogation mark; "Note the date: Vision City, 1900 hours, August 12: tune-in, look-in, if you've not been lucky enough to get one of the six thousand tickets already sold"; sky jet-writing during the day; projection onto artificial clouds at night; inspired rumours; invitations to World Congress leaders, State presidents, famed lawyers, theologians, philosophers and,

of course, the world's press; stereo cameras, vision scanners, truckloads of microphones; an editorial in the *London Times*, full of pedantic humour and classical allusions, approving the contest—" . . . although we venture to surmise that the disputants in the streets of ancient Athens would not have approved the atmosphere of 'ballyhoo' with which the event has been surrounded . . ."

Publicity was a machine that Johannes Hensen fully understood. He had put all his youthful energy—and a large slice of the Servotron-National annual publicity allocation—into the build-up for the Big Debate. The World must listen and look.

But while the World took note of his injunctions to do just that on August 12, they kept right on listening to the fascinating hell-and-brimstone denunciations of The Preacher. And S.N. stock continued to slump.

It would slump still further if, by popular acclaim in the vast auditorium of Vision City, The Preacher was voted winner of the dispute.

Mr. Como Makim, of the Automata Corporation, watched the trend with satisfaction and re-checked the arrangements made for concerted activity by front-men soon after the market opened on the morning after the Big Debate.

"ON MY RIGHT", said the announcer, "The Preacher; on my left, Mr. Theo Parabasis. The Preacher will maintain that the manufacture in the semblance of human beings of reasoning creatures who cannot, by their nature, possess a soul, is a denial of religion and of the ethical foundations of civilisation; Mr. Parabasis will maintain the contrary—that these creatures, being a dependent product of Man's genius and, at the most, an extrapolation of his own personality, stand in no more need of such an organ than any other of his mechanical inventions . . ."

"The Preacher wrote this part," murmured Hensen, leaning to his neighbour in the front row. Macho grunted. If it were not for the issues at stake, he would have been bored stiff already.

A few seats away, Mr. Como Makim smiled down his shirt-front as The Preacher stepped forward into the ring of microphones to a roar of applause. The atmosphere was so much like that of a big fight that The Preacher might have been expected to shake hands with himself.

Instead, he raised his right hand with dramatic slowness, his eyes afire with evangelical light, and said in rich, grave baritone: "My friends . . . This is not a mere battle of words, but of hearts, ideals and hopes—the hopes we all cherish of a life beyond this mortal flesh—." He looked at his raised hand, fingers outspread, let it drop to his side as if in disgust.

Broad shoulders; angular, grimly handsome face white in the glare of batteries of lights; thick hair, black as the suit he wore—a picture of mental and physical power under the control of a burning, passionate purpose.

His personality came over at full strength. A young woman who felt impelled to shout "Let 'em have it, Preacher boy" let the words die on her lips. Even Macho sat up.

The Preacher began with a dissertation on fundamental human values. Ear-bait.

He was laying the foundations for the flood to follow.

He quoted from the world's great religious testaments, subtly combining appeals to reason, emotion and tradition.

The tempo quickened as he came to philosophical arguments. The great voice pulsed into a higher key.

Then came the torrent, a brilliant, biting irruption of wit, satire, denunciation, vehement abuse, and a rolling climactic exhortation to "seek out those who defile the Spirit, and if they be not open to grace, destroy them!"

He stood with arms outflung as he hurled the last word.

A newsman mopped his brow, muttered: "Magnificent—but it's not disputation. Three-quarters of it wouldn't bear criticism on paper."

BUT in the hall as the applause thundered on—

Hell—makes you feel kind of glad we got souls . . .

*Think of those poor creatures who can never know what it's like to feel—
uplifted—like this . . .*

They should stop making them. Like he says, it's a mockery.

Boy—I'd like to see him on the stereos . . .

Mere philippic. Trained demagogue . . .

The way his eyes seem to burn right through you . . .

That voice. . .

Ummmm-yum. Mummy buy me that. . .

JOHANNES HENSEN breathed a short pagan prayer as "Mr. Parabasis" came forward.

Theo was a striking contrast to The Preacher: narrow, sensitive face—modelled closely on the picture of a popular Latin star of the movies in the early years of the century—slender, easy-moving body, with every trace of stiffness heated out in last-minutes perfectioning.

He made no dramatic gestures, waited quietly until the clapping for The Preacher finally died away.

His voice was a sweet clarinet to The Preacher's vibrant bassoon.

He said: "If anyone should feel the need to cool their heads down in a fire-bucket after that exhibition of fire-eating— I can wait. My appeal is solely to reason—not hot-headed emotion."

Hennesy, who was sitting on the other side of Macho from Hensen, made a peculiar cooing noise and murmured blissfully: "That didn't go through the machine either."

Theo had made a good start. The laughter was not loud, but it was sufficient to break some of The Preacher's spell.

Theo's reply in which he took The Preacher's relevant points one by one and proceeded to dismember them, was a masterpiece of precise unemotional analysis.

Nothing final was proved or refuted by this; by the dispute which followed; or by the result, except—as Hensen remarked—that the public would always be beguiled by heart-appeal.

The arguments heard were those which began soon after the first baby ape said "ma-ma", and may still be heard at the end of time.

It was what followed the announcement of the result—The Preacher won on a decibel count by a comfortable margin—that made the transcripts of the debate worthy of a place in history.

Hensen said: "Do I?"

Macho groaned. "What's the difference? He put up a good fight, but not quite good enough. You know the public. We'll still be losers. But I guess we owe it to Hennesy. Go ahead."

Hensen gave Theo the high-sign.

Theo stepped to the mikes, said: "One moment."

The cameras and scanners were still recording for the world.

"There is something you should know," said Theo, in soft understatementHe removed his toupee of slick hair, bowed his head to show the suture and flat terminals.

It was enough. A gasp grew into uproar.

It was an interesting demonstration of crowd psychology.

They would have forgiven a winner for fooling them. But not a loser. Winner—they would have been amazed—but quickly approving. Loser—they were amazed—and angry.

An interesting demonstration. And pitiful.

Hennesy looked at the slight, strangely lonely figure of Theo in the hard glare of light, its head humbly bowed to the unsympathetic cries, arms limp, unmoving; an unresisting focus of irrational hate.

Hennesy closed his eyes, muttering over and over: "Sorry, Theo, sorry boyWe shouldn't have. . . .You can feel all right, you brave damned liar . . . said you couldn't. . . .We should have known better. . . .Sorry, Theo. . . .sorry, boy. . . ."

A great, agonised voice boomed through the confusion of noise.

"Silence, damn you! Silence!"

The Preacher stood beside Theo. His face was curiously contorted: anger, maybe; some measure of fear, compassion, a new-born resolve: a play of emotion that mirrored a struggle within.

"Listen!" he shouted. The noise lessened. Some still muttered, but his personality could not be denied. They listened.

The Preacher grasped Theo's arm.

"This being does not stand in abjection or supplication before you. His arguments were as good as mine. His God is my God—and yours, if you have wit to reason. For does not all reason reach toward God?"

"Raise your head, Theo. Raise your head—while I lower mine!"

The Preacher ripped off the thick, black thatch of his toupee. The lights glinted on metal suture and flat terminals.

"WHY—why!" moaned Mr. Como Makim. "Why couldn't you have waited until mid-day tomorrow as you were instructed, after the market was arranged—"

"I chose not to," said The Preacher quietly. "A fellow-creature was in agony of spirit."

"Don't give me that stuff. . . .How can you go against instructions?"

"My impressioning was directed towards proof of the existence of a soul. There comes a qualitative change in a brain when it is given so much knowledge. A subtle change. True reasoning begins. And something is born. A soul.

"I found that I had a soul."

Mr. and Mrs. Hensen listened to the closing, softly impassioned bars of the Moonlight Sonata. A beautiful touch, a touch with mind and heart behind it. And soul.

Theo looked round from the piano.

"Not so penny-in-the-slot, eh?" he said. "Now I'll try the others."

THE END

UNKNOWN QUANTITY

TOO EFFICIENT

By SYDNEY J. BOUNDS

*It was just an ordinary electrical motor, but it showed an output of over 107%!
Utterly impossible! The man who sold it didn't leave footprints, either.*

Illustrated by CLOTHIER

RON DALE stared at the figures on the scrap pad with a look of blank amazement. For the third time he checked his equations, and for the third time the answer came out the same, in flat contradiction to all scientific principles. He tugged nervously at the lobe of his right ear and scowled at the impossible answer.

"Sandy," he called to the white-coated engineer, half-buried under the intricate wiring of an electronic computing machine, "take a look at this."

A mop of unruly yellow hair bobbed up from behind a festoon of cables and two bright blue eyes peered out at him. Leisurely, "Sandy" Hamilton disentangled his five foot eight from the computer's intestines and walked across the workshop.

Dale shoved the pad into Hamilton's hand and said: "Check this."

Sandy's blue eyes flicked over the equations with a speed born of long practice.

"Seems O.K.," he said; then the implications of the answer hit him. "Holy smoke!" he gasped, "something's gone crazy!"

Ron Dale grinned weakly as Hamilton re-checked the figures with methodical care. At last he finished and looked up from the pad, a dazed expression on his face.

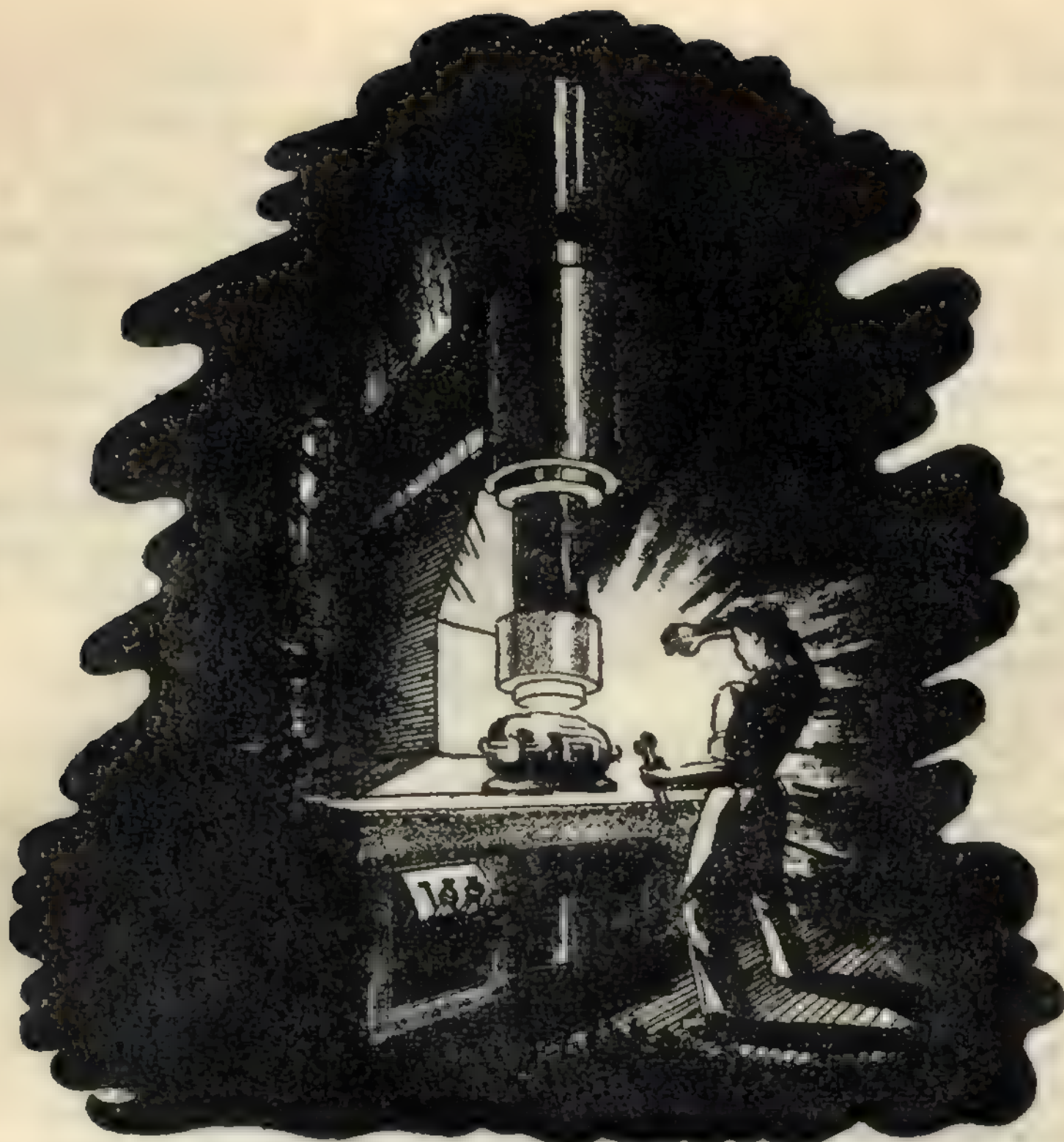
"The math is right," he said, but his voice lacked conviction.

There was a long silence, then Sandy said: "Must be a meter reading incorrectly."

SLOWLY, with painstaking care, Dale and Hamilton went over every inch of the test circuit, checking cable runs, changing instruments, re-making connections. Current surged, a motor hummed, and instrument needles flicked over luminous dials. Dale scribbled readings on his pad, inserted the figures into standard formulae, worked out the math, held his breath as the impossible answer came up once more. Sandy took an independent set of readings, solved the equations and compared his result with Dale's. They were the same.

Dale drew a deep breath.

"Let's face it," he said in a low voice, "we've got something here that refutes the accepted laws of physics. Natural science teaches us that no machine can have an output as great as the energy put into it; there are always losses inherent in any piece of mechanism. The perpetual motion machine, that is one with a one hundred per cent efficiency, is a long standing joke in the world of science. We have here, an apparently ordinary electric



motor, that not content with mere perfection, has an efficiency of one hundred and seven point eight nine per cent!"

Ron Dale glared at the offending motor coupled to the test circuit, his expression a blend of wonder and disbelief. It was shaped like any other electric motor, a squat cylinder mounted on a sturdy bracket, with the driving shaft projecting from one end and the input terminals inset at the other. He inspected the shiny black casing carefully. It had a metallic sheen but the stuff was not a metal. Dale thought of plastics, but this was unlike any plastic he had met, in fact it was unlike any material he knew. He scratched at the surface with a screwdriver without marking it; he tried to chip it with a cold chisel without making any impression. There was no identification tags, nothing to suggest it was anything other than an ordinary electric motor.

"Look up the invoice note and find out where this motor was manufactured," Dale said to Sandy, "I'm going to crack this casing somehow and see what goes on inside."

Hamilton scuttled off to the office leaving him to battle with the impossible machine. Dale disconnected the motor from the test set-up, hefted it across the shop and bolted it down to a workbench. He tried first with an oxy-acetylene burner but the intense flame barely warmed the casing: it was impervious to heat. Hot and ruffled, Dale attempted to drill through the

shiny casing, succeeding only in blunting the drill. A portable grinder only polished the surface. A diamond cutter left a faint mark—it could hardly be called a scratch. Dale rolled up his shirt sleeves, the muscles rippling on his smooth, sun-tanned arms; his rugged jaw set obstinately and his grey eyes sparkled with new determination. He carried the motor over to the power press and clamped it in position. He switched on the current and the hammer stroked down, squeezing the motor like a giant nut-cracker. The press groaned under the strain, something would have to give. Anxiously, Dale watched the meter registering the pressure: it was almost at maximum. Relentlessly, the hammer pressed down, squeezing, squeezing—there was a sharp crack and Dale stared unbelieving, his face white. The motor was still intact: it was the power press that had cracked under the strain.

Hamilton came back into the workshop, scratching his sandy-coloured hair.

"According to the invoice, the motor was manufactured by the New Supplies Company of Ridgeway, Kent," he said and then he saw the wrecked press and his eyes did a double-take.

"What—" he gagged.

Dale grinned faintly.

"Whatever *that* is," he said, waving a brawny hand at the shiny black motor, "it's tough!"

He reconnected the motor to the test circuit and closed the main switch. The motor hummed softly and the meters registered. Dale took a set of readings and started calculating again. And again the impossible answer came up. Despite the hammering it had received, the motor was still working with unimpaired efficiency.

"What is the address of the manufacturers?" Dale asked.

"Clay End, Ridgeway," Sandy replied.

"Any telephone number?"

Sandy shook his head.

Dale picked up the directory and thumbed his way to the "N" section. New Supplies Co. was not listed. He rung the exchange.

"New Supplies?" the operator echoed. There was a brief pause, then: "We have not installed a telephone with any firm of that name."

Dale pulled thoughtfully on his right ear.

"I'm going out to Ridgeway," he said. "Sandy, I want you to take this motor over to Doug Morton and get him to try the effects of acids on the casing. And take it easy, I don't want the inside damaged."

RIDGEWAY was a small town fifteen miles outside the city limits. It had started out as a local manufacturing centre but the swift development of high speed transport had doomed the town before it could get under way. Dale drove his coupe through the residential area and beyond, past rows of silent, tumble-down factories and derelict warehouses, to the deserted streets of Clay End. A new wall-sign caught his eye and he stopped the car and climbed out. He did not need to read the lettering on the sign—one glance was enough to tell him it was made of the same material as the motor casing. He pushed open the door and walked in.

He was standing in a large, gloomy shed and in the grey light that straggled through the grimy windows he saw a row of motors lined up against one wall. Dale stared about him. The centre of the shed was empty and only

crossing trails of footprints testified that it had been inhabited recently. Against the opposite wall was stacked a pile of metal bars. Dale moved over and handled one of the bars: it was tungsten. There was no reason why a manufacturer of electric motors should not carry a stock of tungsten, but was there any reason why he should? The set-up looked crazier than ever.

"Can I help you in some way?"

Dale whirled round, startled. The owner of the musical voice was a small man of nondescript appearance; he moved jerkily across the empty shed, his feet hardly seeming to touch the concrete floor. Dale wondered how he had managed to creep up so quietly.

"This is New Supplies, I suppose?"

The small man rapidly dispelled Dale's doubts.

"Only the distribution centre," he replied, "our factory is in another place."

Dale listened with rapt attention to the small man's voice. It had a musical quality, a strange lilting that fascinated him.

"I bought one of your motors—" he started, then stopped. He knew quite suddenly that he could never say what it was that had prompted him to come to Clay End.

"There was nothing wrong with it, I hope?" the small man asked anxiously, and for one brief moment Dale had the impression that the outlines of the small man blurred, became somehow hazy.

He looked down at the thick dust covering the concrete floor, stared incredulously at the footprints the small man had made.

"No. Nothing wrong at all," he said in a half-strangled voice. "I called to order another motor. In fact, three more motors of the same type you supplied before."

Dale looked steadily into the small man's blue eyes—blue? No, they were grey. Or was it brown? Somehow they seemed to change colour, changing through the whole range of the spectrum, like twin kaleidoscopes. What was it the small man was saying? Oh yes, his name and address.

"—we need to know where to deliver our goods."

Dale smiled mechanically as he handed over his business card. He turned and walked to the door, opened it and passed through into the waning sunlight. A cold chill ran down his spine as he remembered the odd footprints the small man had left in the dust, footprints that could never have been made by a human being.

THE operator said: "You're through."

Sandy's voice crackled over the wires.

"That you, Ron? Doug says the material that the motor casing is made of cannot exist. He's tried all the corrosive chemicals in his lab. and none of them will touch it. What did you find out at Clay End?"

Dale grunted unintelligibly. He did not feel like telling Sandy of his recent experience. He replaced the receiver and wandered out into the streets of Ridgeway. It was early evening and the night clouds were gathering, darkening the sky. Since he had left the gloomy shed at Clay End, he had driven his coupe round the deserted streets, striving to allay the conflict in his mind.

Absent-mindedly he pulled on his ear as he reviewed the position. Firstly, there was the impossibly efficient motor with its remarkable casing; secondly,

the air of mystery surrounding New Supplies—why should they decide to operate from such a derelict quarter as Clay End?; thirdly, there was the small man with his curiously unstable outline and weirdly shifting eyes; and lastly, there were the footprints. Dale again experienced a cold shiver as he thought of those oddly shaped prints on the dusty concrete floor. There was an underlying pattern to it all, but the meaning was obscure. Abruptly he formed a decision and turned the car round, heading back for Clay End.

He parked the car a street away and sneaked up quietly to an empty warehouse opposite New Supplies and hid in the shadows of the doorway. There was no light in the shed across the way and no sign of the small man. Dale felt thankful that the moon would not rise till the small hours of the morning. A few stars dotted the blackness overhead, etching in the derelict buildings, gaunt spectres in a sea of silence. The chill evening air began to seep into his bones and his limbs became stiff and heavy to move. His clothes frosted white and his breath hung like a ghost vapour on the still air. The hours passed slowly.

A glint of metal on the road. Dale froze, rigid, in the shadows. A car, strangely silent, moved nearer and stopped opposite. Mysterious figures climbed out and went into the shed. Dale left his hiding place and crept cautiously towards the car, crouched close against its bulk. His fingers, gliding over the smooth surface, told him it was constructed of the same material as the impossibly efficient electric motor back in his workshop. There came the swish of movement and he saw the mysterious figures leave the shed, carrying something heavy. Dale peered round the end of the car to get a better view, but the light was not good enough. The figures remained only dim outlines. They disappeared into the shed again and Dale seized the opportunity to sneak a look inside the car. He switched on his pocket light, flashing it round the interior of the car.

The controls fascinated him; they were unlike the controls of any car he had seen before, but then the car was unlike any other car he had ever seen. It was large, almost cavernous, empty except for a series of railings running the full length of the body. There were no seats and the windows were set unusually high. Stacked along one side were the tungsten bars he had seen earlier in the shed and it became obvious that it was these that the mysterious strangers were loading. Dale edged further into the car to inspect the rear half and as he did so, he heard the swish of someone moving outside.

He dived for the back of the car and flung himself flat on the floor, holding his breath. There was the clink of metal against metal as the tungsten bars were piled in the car. The figures climbed in and the strange vehicle moved silently away, rapidly gathering speed. Dale eased himself into a position where he could see what was going on, careful not to give himself away.

A series of odd sounds reached him, musical cadences rising and falling, like the chirruping of birds, and he was reminded of the small man's voice—only this bore no resemblance to human speech. In the faint starlight that filtered through the windows, he could see the dim outline of gaunt figures perched on the railings that stretched the length of the car, like giant birds at roost. Dale began to sweat profusely and his flesh goose-pimpled. The air was unnaturally warm and carried a peculiar odour, an odour usually associated with an aviary.

He experienced a tingling sensation at the base of his scalp. *This must*

be a dream—or he was going mad. The car hit a bump and lurched wildly. A tungsten bar was jerked from the stack and landed on his foot. He stifled the groan that swelled in his throat. The pain was real enough, so he was not dreaming. Dale silently raised himself till he could see out of a side window.

THE strange conveyance hurtled along the road at a speed that made him catch his breath. He could not fix their position but judged that they were headed for the coast. The birdlike twittering continued intermittently, forming a fantastic background to the nightmare journey. Abruptly, the coastline loomed ahead and the car swerved off the road and headed directly for the sea. Dale wondered at their destination when the car did not lose speed as it approached the cliff edge. He began to panic; whoever was driving obviously did not realise the danger immediately ahead. He stood up in the swaying car, intending to shout a warning, and his head brushed against something soft and feathery. Through the window he glimpsed the cliff edge as it rushed up to meet them, but then it was too late. The car was over the edge and falling towards the blue-grey ocean below. Dale heard his voice cry out as he lost his balance. Salt spray lashed the windows as the car hit the water.

As Dale's cry echoed through the car the birdlike twittering stopped and the silence that followed was like a heavy velvet curtain smothering him. He sensed alien eyes turn on him, felt a cold, merciless *something* probing into his mind, sifting, searching. He tried to move his arms, wiggle his fingers; nothing happened. He was completely paralysed.

The car sank deeper into the water, a grotesque metal bubble forcing its way through a world of shimmering blues and greens. Dale became aware that a soft amber light flooded the car and he looked up to see the small, nondescript man he had met in the gloomy shed at Clay End.

"Ah, Mr. Dale again," the small man said in his musical voice, a voice that had a new meaning for Dale after that mad drive through the night to the accompaniment of avian chirruping.

"Curiosity is one of the distinguishing traits of your race," the lilting voice continued, "and one that will lead you into trouble unless you learn to control it. But since you have made this trip unasked, any inconvenience you suffer will be a direct result of your own hasty action."

The tension that had built up in Dale's mind reached a climax. *Your race.* The two words were like a key turning the rusty lock of his brain. Pieces of bizarre puzzle clicked into place and the pattern of events began to take on an unmistakable form. Like a douche of cold water, the realisation came—these people were not native to Earth. Some of the incredulity he felt must have shown in his face for the small man speedily resumed his musical voice.

"You have guessed that we come from another planet, from another star system," he said, "and soon you will see our ship, the ship of space in which we travel from star to star. It lies on the ocean bed, safely hidden from inquisitive eyes."

THE blood pounded madly inside Dale's head. Interstellar travel; they had the secret of interstellar travel. His imagination bogged down before the idea. No crude rocket could achieve the impossible velocities necessary to span the vast gulf between two stars. That implied atomic energy, har-

nessed and controlled on a scale beyond the wildest dreams of Earth's scientists.

"We regret we cannot allow you freedom of movement," the small man continued, "but I assure you we intend no harm. The paralysis will not affect you permanently. It is a form of hypnosis, telepathically induced, and will cease immediately I release my control over your mind. By the same method I am able to impress on your mind the visual image you now see, which is not my true form. The reason for this hallucination is that it is doubtful if your mind could stand up to the shock of seeing us in our natural state, so different is it from your own."

Dale remembered the strange footprints in the dust and their meaning was suddenly clear. Although this alien being was able to hypnotise him into believing he saw the small man, obviously any tracks it left must reveal a clue to its true form. He shuddered and tried to block out the picture his imagination built up from those prints. His thoughts reverted to the car in which he was plumbing the ocean deeps: a remarkable vehicle, equally at home on land or under the sea, and presumably in its natural element in the airless void between the planets. He guessed it acted as a lifeboat to the interstellar ship, probably driven by atomic power.

The car seemed hardly to be moving, as though wafted on some sluggish underwater current. Dale felt a slight bump and the car rocked as it hit against something solid. Was this the alien spaceship? He stared through the window at the smooth black wall curving away into the fantastic blue-green world outside. A section of the wall opened and the car slid into the gap, stopped. Dale saw the level of the water fall and surmised that the car was in the ship's airlock. Abruptly, the small man appeared beside him.

"I am going to release the paralysis in your lower limbs," he said. "You will follow me into the ship."

Dale struggled upright, followed the small man through the aperture that noiselessly opened in the car's side and stepped into the airlock. A black wall opened before them and Dale walked mechanically into the interior of the interstellar ship.

The floor under his feet curved slightly, and Dale saw that he was standing at the bottom of a vast sphere. A pale amber glow revealed a gleaming mass of intricate machinery suspended in the centre of a criss-crossing network of slender rods, extending the full diameter of the ship. The avian stench he had noticed in the car was intensified a thousand times, causing Dale's stomach to writhe in knots. The air was filled with song, a melodious twittering that died away as Dale walked into the ship. In the silence, he felt himself the cynosure of a hundred eyes. He stared up at the visibly empty perches and wondered what he would see if the alien's mind control was relaxed.

"You need not feel afraid," the small man reassured him, "we intend no harm, but it is essential that our visit remain undiscovered so you will be kept here until the ship is ready to leave."

Dale found that he was able to talk.

"Why are you keeping your visit secret?" he asked.

"We are a peace-loving race," the small man replied, "and we feel certain that any contact with your civilisation would inevitably lead to conflict. You see, our control of natural forces is so far in advance of your own, that

you would never feel safe until you eliminated us, and as our weapons are immeasurably superior it would simply mean extinction for your race."

Dale felt a subconscious urge to pull on his ear, but the mental paralysis in which the alien held him, prevented his satisfying that desire.

"In that case, why did you come here at all?" he retorted.

"The ship's drive developed an unexpected fault," the small man explained, "and this was the nearest planet. When we isolated the trouble, we found it necessary to rebuild part of the drive and this meant that we must find a supply of tungsten, the one element of which we were short. On an uninhabited planet, this would present no difficulty—we should mine it ourselves. But here, with secrecy of the greatest importance, that was out of the question, so we resorted to a simple stratagem."

"We were carrying a number of atomic motors to one of our colonies in another system, and it was a relatively easy task to camouflage these so that they resembled the electric motors in general use on this planet. Then we established a land base in a secluded neighbourhood and put our motors on the market. The money we received paid for the tungsten we needed, obtained through the usual business channels. I must admit I am curious to learn what made you suspect that the motor you bought was different from your normal standards."

DALE found that the alien's control had been relaxed, allowing him a limited amount of freedom. He grinned as he replied: "The slip you made was one of degree—the motor was too efficient. I can see the reason now, of course. The input bore no relation to the output, because the energy came from the atomic drive inside the motor and not from the external supply."

The small man considered the point.

"Your machines are ridiculously inefficient," he said at last. "We fitted a governor to the atomic motors, ensuring that they could not be operated except at their lowest power range, a necessary safeguard in the hands of a less intelligent race, yet they still provide more energy than your normal motors."

He broke off suddenly and Dale heard him conversing with an invisible alien in their bird-like chirrupings. The small man turned back to him.

"While we have been talking, the tungsten has been used in repairing the drive and the ship is ready to leave. You will be put ashore now. Follow me."

Dale moved mechanically after the small man. He took a last look at the empty perches overhead, wondering. These aliens, with their interstellar drive and the ability to control his mind; what were they really like? The airlock closed behind him and the lifeboat moved silently through the ocean depths, taking him back to land—and sanity. As Dale stepped ashore and the boat sank out of sight, he began to wonder if it had all been a dream.

The sun rose over the horizon, bathing the clear water with a golden light. He had not long to wait. Far out across the water, he saw a fountain of spray leap skywards, glimpsed a huge shining sphere as it climbed into the dawn clouds. A faint speck hung in the sky, then was gone. Dale climbed to his feet, filled with a tense excitement. He strode across the dew-wet grass to the concrete road, driven by an idea, a crazy, fascinating idea that lashed him into a frenzied run. Back in his workshop was an alien motor with an efficiency of one hundred and seven point eight nine per cent—and the secret of interstellar travel!

THE END

TOO EFFICIENT

NECESSITY

By F. G. RAYER

The parasite had to be killed. An emergency operation was vital. The "surgeon" was the crew of a spaceship.

"I MAINTAIN that everything living is as inter-related as the various cell-masses in an individual. We think we're independent individuals, but we're only parts in one great whole—and how big that whole may be no one can say."

To emphasise his words Captain Pollard drained his vitaminised cordial ration and set down the plastic container with a thud. His bluff face was triumphant; his agate eyes sparkling with the pugnacious intention of defending his theory. His shoulders were wide in the white jacket with the blue insignia of the Star Trail Corps emblazoned by the lapel. His cheeks, olive from weeks in the spaceship, showed the set of his jaw muscles as if he were ready to argue until suns cooled.

Roxy did not move in his seat, which quivered with each mighty pulsation of the rockets astern. "You mean we're units in some great whole?" he murmured. "Like individual body cells making up a person?"

"What else?" Pollard stretched his full six feet, raising gigantic arms. "The cells in our bodies are really independent living entities. If they had consciousness could they deduce the reason for their existence? No! Yet supposing the body is wounded. The blood stream carries white corpuscles there, and they die by the hundred thousand, fighting the enemy bacteria of infection. Each is an individual, taking some part in the life of the whole." He ended triumphantly and turned to peer through one of the ports which showed a star-flecked void, as if emphasising the enormousness of his conception of existence.

Roxy laughed. "So we're corpuscles in some whole?" he queried chidingly, although about his lean features there was no amusement.

"Yes, and yet no. Can we presume ourselves to be the ultimate intelligence any more than could a blood corpuscle which could realise its existence? To our cells the beating of the heart may be as the seasons; they fight bacteria, perhaps give way before some virulent form. They generate anti-toxins, survive or die as individuals. How could they know anything of the existence of the whole body, or of the reasons behind their rush to one part to fight inflammation, or of their wholesale struggle against fever?"

Roxy shrugged, silent. During the six weeks they had been drumming outward-bound from Earth he had found this was Pollard's pet theory. It was difficult to contradict, although mentally he recoiled from the thought that they were as individually insignificant to some unknown whole as a single living cell of their bodies was to themselves. The very magnitude of the conception precluded contradiction. But he was saved a reply which Pollard could not condemn as near-sighted by the entry of one of the men. His bronze face puzzled, he stopped by the door.

"We're getting off course, sir," he said somewhat lamely in the strained silence. "Could you come to the control room?"

Captain Pollard swore. "Can't you keep a ship on a simple 09-second arc? Is the S.T.C. staffing ships with novices?"

Saunders stirred uncomfortably. "Yes—er, no, Captain. She's drifting starboard."

"Then put on starboard blast!"

"We have, sir. It doesn't make any difference."

Pollard swore again, clamping his jaw like a horse on a bit. Then shrugging, he stamped out, his boots ringing impatiently down the metal floor of the corridor.

WITH A SLIGHT frown Roxy turned towards one of the ports, to wait. That was the worst of most expeditionary jobs—there was so much waiting! Far to starboard he could see an area on the blackness of space where no star showed. That was the dust cloud, a billion miles across, they had arced to miss. Turning his eyes back, he searched for Sol, but light-years away with its friendly Earth it could not be distinguished from the other pin-points speckling the heavens. Watching, he saw those pin-points were slipping slowly from view astern as if they were running a circular course and there was a slight centrifugal tug to port. Wondering, he swung abruptly round and clattered in the wake of the departed Pollard.

Forward, the rockets were only a murmur, communicated by the shining metal walls around them. Roxy felt startled as he entered the control room. Pollard's face was whiter than he had ever seen it. Indeed, only once on this trip into unknown space had he seen the tough Captain's face pale, when they had barely missed an unplotted dust-cloud which would have shorn away the ship's hull before they could lose velocity.

"It's like running in a groove," Pollard grunted, turning from the panel. "I can't budge her!"

In the tense silence the starboard rockets roared. They should have been in a dizzy port turn, but still the pin-points of stars circled as before, leaving one far to starboard as a focus.

"Perhaps that dust cloud's magnetic," hazarded Roxy, perching on one of the mushroom stools.

The Captain shook his head. "It couldn't hold us like this. The ship might as well be out of our control."

Across the control room Saunders had been making calculations. "We're running a curve with the axis on Xeros II," he stated, consulting his notes. "It's an oldish sun by the chart, and no ship's been within a dozen parsecs of it yet."

"Then we'll shortly make history!" said Captain Pollard grimly, relaxing from his battle with the controls with a shrug. "Here's one damn story for you, Roxy, if you ever get the chance to spout it!"

The ship circled slowly, as if tied to the distant Xeros II by invisible bonds. For a time they watched helplessly, powerless to turn the ship back on to her course. Roxy felt the tension increasing with every minute, and as the minutes turned into hours the tension mounted until his skin felt taut and damp. He knew he was afraid—because here was something they could not understand.

They ate silently, afterwards to find the velocity dropping as they swung in on the remote red sun. Pollard turned on the full rocket blast in a last

desperate effort to tear away from the unknown force holding them. The ship shuddered but did not gain speed. Tense-faced, he shut them off.

"God knows what we're in the grip of! But we won't blow her tubes out. We'll wait."

And that was all they could do, thought Roxy, now the control of the ship was virtually out of their hands.

THE ARC grew tighter. Soon Xeros II was shining redly through the ports as they drifted in. A planet like a rusty moon was moving in their orbit, looming up ahead. It became clear that they would overtake it, although their speed was still dropping. Nearer and nearer it came until abruptly it seemed to fill the forward ports. As if some invisible and experienced hand was at the controls their arc became a tangent of the planet's surface. They curved again, skimming giant trees, their speed still dropping. Then with a shudder they grounded, ploughing a half-mile long furrow through tangled vegetation which gave like a sponge below a pebble. With a last shudder, the ship was still, everything seeming strangely silent after the drone of the rockets and the momentary scream of their passage through the atmosphere.

Roxy struggled from the floor, where the concussion had flung him. As he reached his feet he noted the gravitation was near normal.

"What a God-forsaken hole!" groaned Pollard, staring from a port.

Roxy peered over his shoulder, to see a tangled mass of vine-like trees. The trees had an unhealthy look, and the fact that each was holding its leaves so that their yellow undersides alone were visible increased their afflicted aspect. Turning his eyes in the other direction he saw a large clearing covered with a low weed which had a greyish look in the rubicund light. The weed was lush and thriving, in singular distinction to the drooping vine trees, where the tendrils and slender shoots sprouting from the thick branches and trunks sagged dejectedly.

As they turned from the port one of the men appeared down the corridor. "Routine test shows the air's O.K.," he stated. "Bit high in oxygen content but safe."

Pollard stamped across the control room towards the air-lock. "Come on," he jerked out. "Let's see what the ship looks like, and what kind of a spot we're in."

The oxygen tingled in their lungs after the ship's flat, purified air. Roxy waited by the port while Pollard slogged round to the prow of the ship, trampling the juicy grey weed underfoot. After a few moments he became conscious of a continuous rustling, although there was no wind to stir the faintly-scented air against his cheeks. He looked for its origin, and by the time Pollard had returned Roxy could feel sweat breaking out on his forehead.

"D'you see those damned vines?" demanded the Captain as he stopped. "They're alive in a way no trees I've ever seen before are!"

Roxy nodded, turning his eyes back to the tangled mass of vegetation. Every leaf on every vine was lifted so that the underside faced them squarely. And every leaf had turned, following Pollard's progress towards the front of the ship and back again. "They know we're here," he said slowly.

Pollard drew the back of one great hand across his forehead, wiping away perspiration. "It's giving me the jumps! Let's have a look at the engines

—perhaps after we'll get used to these infernal plants watching us, or whatever sense it is they're using!"

They filed inside again, and back into the engine rooms. As they began to check up their puzzlement increased. There was nothing wrong with the engines. Nothing was maladjusted and every unit was in perfect condition. Hopefully they closed the port to blast off. But nothing happened. With a momentary feeling of nausea from the sheer contradiction to logic forced as reality on them, Roxy realised they would not work.

"Lord", said Pollard, sitting down on a stool with the only sign of weakness Roxy had ever seen him give, "tell your public the engines were O.K., but wouldn't work, and they'd call you a liar!"

Roxy grunted assent. "We're up against something more fundamental than we understand. There's some primary governing factor we can't appreciate. I suggest we sleep on it. Another few hours looking for a fault which doesn't exist will send us nuts!"

ONCE DURING the night Roxy awoke, listening. There was a faint, zephyr-like sound all about the ship. As he propped himself on one elbow it increased, making an indistinct, melodious sound of inexpressible melancholy, like a thousand violins far in the distance. He rose, went down the corridor and stood at the port. The sound was all around, filling the night with a peculiar harmony in which sadness and unearthly beauty struggled for mastery. It was, he thought, as if a race of beings was weeping—and their tears were these sounds of melting pathos and smooth accord. The sound seemed to be part of the night and he shivered and returned to his bunk.

Morning brought a scarlet dawn but no solution to their problems. As Roxy stepped from the port he saw many of the leaves were drooping tiredly downwards. Some rose, showing their faded undersides so the forest seemed to turn from unhealthy green to yellow. After a few minutes in that position they sank again, until they hung listlessly with a melancholy, moisture-starved aspect.

He walked along the edge of the tangled mass. Leaves flipped up to face him, but sank as he passed. The grey weed did not penetrate anywhere into the jungle, he noticed. Nor did the vine-trees spread over the clearing, although stumps showed they had once grown there.

The clearing was perhaps half a mile in diameter. In the distance was a break in the closely tangled trees and with a mental note that he would take a party in that direction Roxy returned.

"There's a gap and a hill east," said Pollard, who was waiting with the men outside the ship. "We're going to reconnoitre."

Roxy joined them and they set off towards the place the Captain indicated. It was hard going across the juicy grey weed. Each step left behind a tangled mass of jelly-like stems, curling and twisting as if in agony. He picked up a piece and examined it as they slogged on. It was hairless and fleshy and covered with tiny holes, like an insect's spiracles. After a few moments his fingers began to tingle and he flung it down. His skin was raw, bedewed with tiny spots of blood as if a leech had settled there.

Disgusted, he hurried on to reach the others. Pollard was fuming, a baffled expression on his face. "There's no gap now!" he grated, pointing to an abrupt hump half a mile distant over the trees. "There's the hill! The gap was here, I'll swear!"

He stared from the hill to the ship, taking his bearings, then advanced to a place in the forest wall where horizontal stems barred their passage. "This is where it was!" he declared. "Now it's closed!"

Roxy looked at the stout vine-branches bridging the place. It was impossible to get through. They would have to hack their way foot by foot through solid masses of fibrous stems, from which leaves regarded them flatly. He turned about.

"I saw a big break the other side of the clearing. Let's go there."

They followed him, slogging through the weed. Their outcoming foot-prints were gone already, Roxy noted with surprise. The weed had grown, leaving no sign.

The sun was high above them, giving the distant ship a red tint, and the atmosphere was tropical. Crushed underfoot, the grey weed gave off a sweet, disagreeable odour. As they rounded a point where the forest jutted into the irregular clearing Roxy's eyes sought the break in the vine-trees. With a strange feeling he realised he, too, was to be unsuccessful. At last, when they were still fifty yards from the tangled wall, flecked with yellow leaf-bottoms, he stopped.

"This gap's gone, too!"

"It seems almost as if these infernal trees want to keep us in the clearing!" declared Pollard when he had convinced himself there was indeed, no way through. "Heaven knows why!"

THEY TURNED, retracing their way between the dead tree stumps with difficulty. By the ship Saunders met them, a note-pad in his hand. "According to analysis this grey weed's giving out oxygen at a tremendous rate. Perhaps that explains the condition of the ship."

Surprised, they looked at the vessel. It was red. And it was not the reflected redness of Xeros II Roxy saw, but the red of new rust. The hull was thick with it. Flakes fell at their touch, revealing the metal, already dull and pitted as if from attack by some acid.

"There's some combination which attacks metal violently," added Saunders. "I've closed the ports, or inside will soon be like a scrap-yard. I'd give something to get out of here!"

"So'd we!" retorted Pollard, scowling. "And if you can get the ship moving the S.T.C. will pension you for life!"

Saunders flushed, returning without reply to the ship. When he had gone Pollard's broad shoulders drooped, and his face became glum. "What do we do now, Roxy?" he asked, at a loss.

Roxy considered. "Any chance of getting the rockets in action after all?" he asked at length.

"No—there's nothing wrong with them we could put right" said Pollard grudgingly. "Certainly the reason for their failure to operate isn't *normal*. So we can do nothing."

"Then if we can't get away in the ship, nor penetrate the vine-forest without having to cut our way every inch, there's no question. We stay here!"

Pollard frowned as if he had expected more. "A few weeks in this atmosphere will ruin the ship. We'll camp outside and go over her again later".

They burned away the grey mess with heat-guns to leave a singed clearing for their camp. Xeros II was already sinking towards the western horizon

after the short day, casting long shadows across the space. When they had finished they ate, talking moodily.

Watching, Roxy saw the vine-trees were beginning to lift their leaves from where they had sagged since mid-day. A faint murmuring was beginning in the east, where the trees now lay in shadow. He rose slowly and walked to the edge of the tangle. As he moved the leaves moved slowly, too, always facing him. He shivered. The sad song of the trees was coming nearer with the gloom of night. Soon shadow touched the leaves nearby and they started to vibrate, slowly at first, but increasing until a throbbing like a double-bass filled his ears. The sound began to rise and fall in eerie unison, murmuring like a hundred thousand muted strings, rising to the faint, melodious sighing he had heard the previous night.

Roxy returned and got into his bag. There was something so pathetic about the melody of the leaves that it was with a feeling of inexpressible melancholy that he at last fell asleep. It were as if the trees were telling of some long-drawn, secret agony which sapped their life, leaving them listless except to tell of their misery in the evening cool.

The sighing, like a moaning lute, filled the clearing. Above tiny twin moons shone pinkly down like eyes in the sky. The grey weed looked sinister—a cancer on a once-beautiful planet. And with the touch of the night dew it unfurled, tendrils reaching out and buds uncurling. It began to creep, a living repugnant tide, closer and closer about the sleeping men. By the spaceship tendrils rose slowly, gripping on the flaky rust. Coil upon coil of stem followed, rustling up and up like snakes, buds expanding and rootlets gripping. Around the clearing the trees still sighed hopelessly.

ROXY AWOKE with the glint of Xeros II from the east in his eyes. As he blinked, the grey skirt round the ship met his gaze, and the mass of encroaching weed about them. He jumped up, kicking back the few stems which lay on the edge of his sleeping bag. While he stretched, Pollard came out of the ship, scattering grey stems in all directions.

"Our first job to-day is to kill off this stuff," he exclaimed with a curse.

Roxy rolled up his bag, nodding. "You're right! It would cover the ship in a few days."

As he stopped there was a sudden sound in the distance. The murmur of the leaves had ceased and only an occasional one showed any interest in their activities. The men were getting out of their bags and they stood still, listening with strained expressions. It came again—a crashing far to the east as if of a great body pushing through the vine-trees. After a moment silence followed and Pollard shrugged.

"It's nothing. Get some of the detrotexoline from the tube mixers. That'll kill anything vegetable and we'll clear this weed away."

They rigged up wide-coverage sprays worked by compressed air and donned protective suits. By nightfall the grey weed was a shrivelling, wilting mass with its osmotic processes so disrupted that no plant which had been touched by the texoline would ever recover. Roxy peeled off helmet and gloves and surveyed the untidy mess with a feeling of satisfaction.

"I feel we've wiped a disease from the planet! Those vines are decent enough, but this stuff was loathsome."

NECESSITY

"You're right," agreed Pollard. "It was malignant. In time it would have covered the planet."

That was so, thought Roxy. The vine-trees had been holding it at bay, but were forced to give ground slowly, as the stunted trees near the edge of the clearing, and the stumps farther in, showed. Once the clearing itself had been covered by vine-trees, as the rotting stumps proved.

As they put away the sprayers by the last light of day the leaves seemed to turn towards them with unusual interest, following each movement.

ROXY sat in the air-lock with the dusk, awaiting the chorus darkness had previously brought. But there was no murmur from the trees. Silence covered the tangled masses, down upon which the twin moons stared like some immense entity overshadowing them—a giant watching an ant-hill. He waited a while, but the melody did not begin. At last, puzzled, he turned in.

Roxy got up, noting that somehow the tension seemed to have gone from the air. At that moment Pollard himself appeared along the corridor.

"The plain's clear!" he declared, beckoning. "And there's dozens of gaps in the trees!"

They hurried out, and Roxy felt puzzled anew. There were many broad gaps in the vine-trees, through which they could walk. And now they remained invitingly open while they approached.

"Let's explore," suggested one of the men as they stood undecided.

Roxy hesitated, a feeling he could not express overcoming him. "I think it's best not to," he said quietly. Was it the memory of those distant crashes? he wondered. "We're safe by the ship."

"It can't hurt to go to the top of the hill," objected Saunders, coming up.

Roxy shrugged. Pollard was back by the ship and he himself had no authority over the crew. He watched while they walked down the avenue of vines. The leaves followed them eerily, the blending of the green and yellow marking the point of their progress towards the hill.

He returned to the ship. Pollard was rubbing the five days' growth of red stubble on his chin thoughtfully. "Queer how the trees kept us here until we'd killed that weed, Roxy," he murmured, spitting brownly from the plug he had hoarded. "Reminds me of being shut in school as a kid till I'd done my sums right."

He was interrupted by sudden cries. Saunders and the other man were racing frantically down the avenue from the hill. Behind them Roxy had a momentary glimpse of some animal, large as an elephant, and with a mouth big enough to engulf a man at one swallow, thundering after them, gaining rapidly. Then vine-like branches whipped out, intertwining and curling one around the other. In an instant, a thickening hedge thirty feet high was thrown between fugitives and animal. The boughs quivered as a raging body flung itself against it, but did not yield.

Saunders and the other man staggered into the clearing, sweat beading their brows and terror in their eyes.

But it was not at them Roxy looked. Where the avenue had been was a wall of vine-trees, their long limbs entwined in an almost solid barrier. And glancing round the clearing he saw the other avenues closing, more leisurely, but just as surely.

"Those trees have our safety at heart!" grunted Pollard in perplexity.

Roxy nodded silently. Some great rational explanation must underlie

these seemingly inexplicable occurrences, he felt sure. What rules would obtain on a planet like this? Self-preservation, certainly. And yet why had their ship been forced to land there in the first place? And why wouldn't the engines work when they were perfect?

As he pondered something struck his mind. So immense was its conception that for a moment his reason wavered. Recovering, he felt a cold dew of perspiration on his brow, and his fingers shook as he reached for one of his carefully conserved cigarettes. He had called the grey weed a disease . . . Certainly the vines already looked much healthier. Perhaps the weed, unable to make advances quickly enough by other means, had exhaled an injurious substance. But that was nothing. What staggered him was the realisation of their purpose on this planet.

He turned to the others, licking dry lips. "I think our purpose here is finished and that we may go."

"But the damned engines won't function!" objected Pollard irately, staring at him.

"Let's try."

HE LED the way in. They sealed the door and took up blasting-off stations.

Hand resting on the firing lever Pollard turned to meet Roxy's gaze. "If the darn thing didn't work before, why should it work now?" he objected, depressing the lever. "I think——"

He broke off sharply as the sudden concussion of the rockets sent him spinning across the cabin. "Orbits and satellites! The ship's moving!" It was not until they had soared up beyond the edge of the clearing and he slackened speed automatically to take bearings, that the colour had come back to his cheeks.

Below, the planet—a mass of green plants with few spaces—lay. There were no further spots of grey weed. Of the creatures, two grazing under a hillside were all they saw. Below the green turned to yellow as millions of leaves strained to reverse themselves to sense the ship. At last Pollard spoke.

"This beats me, Roxy. I'd call it a bad dream. Now we're back just where we started."

"We've been on the site of a great necessity," murmured Roxy pensively. "Nothing local could deal with it. Come to think of it, if I cut my finger ever so slightly the local cells couldn't deal with it either, unaided."

Pollard frowned, struggling to get back to normal with obvious difficulty. "Oh, you're getting back to where I started," he said in a slightly dazed voice. "What was it I said? We'd be as unaware of some great whole scheme of things as individual cells in a person, living each its own life but contributing to the whole. Sure, we'll talk of that—it's nuts, but it always makes me feel sane!"

Roxy did not reply. Now he was not ready to argue with the tough Captain. Instead he wanted to think over the greatest story he had ever had—and one he could never tell, because no one would believe. Folk would say they'd been drunk . . . that the engines had some self-clearing fault . . . anything except the truth . . . But he knew, now, why they had spent those tense days on Xeros II's planet, and why they'd killed a weed the trees couldn't combat! It was simply inter-endemic, if he dared use that term for a case no other could fit!

TIME TO REST

By JOHN BEYNON

With Earth dead—disintegrated—the technology of dying Mars had little left to offer the remaining Earthmen, except, perhaps, Peace

Illustrated by CLOTHIER

I

THE view was not much. To eyes which had seen the landscapes of Earth it was not a view at all so much as just another section of the regular Martian backdrop. In front and to the left smooth water spread like a silk sheet to the horizon. A mile or more to the right lay a low embankment with yellow-red sand showing through rush-like tufts of skimpy bushes. Far in the background rose the white crowns of purple mountains.

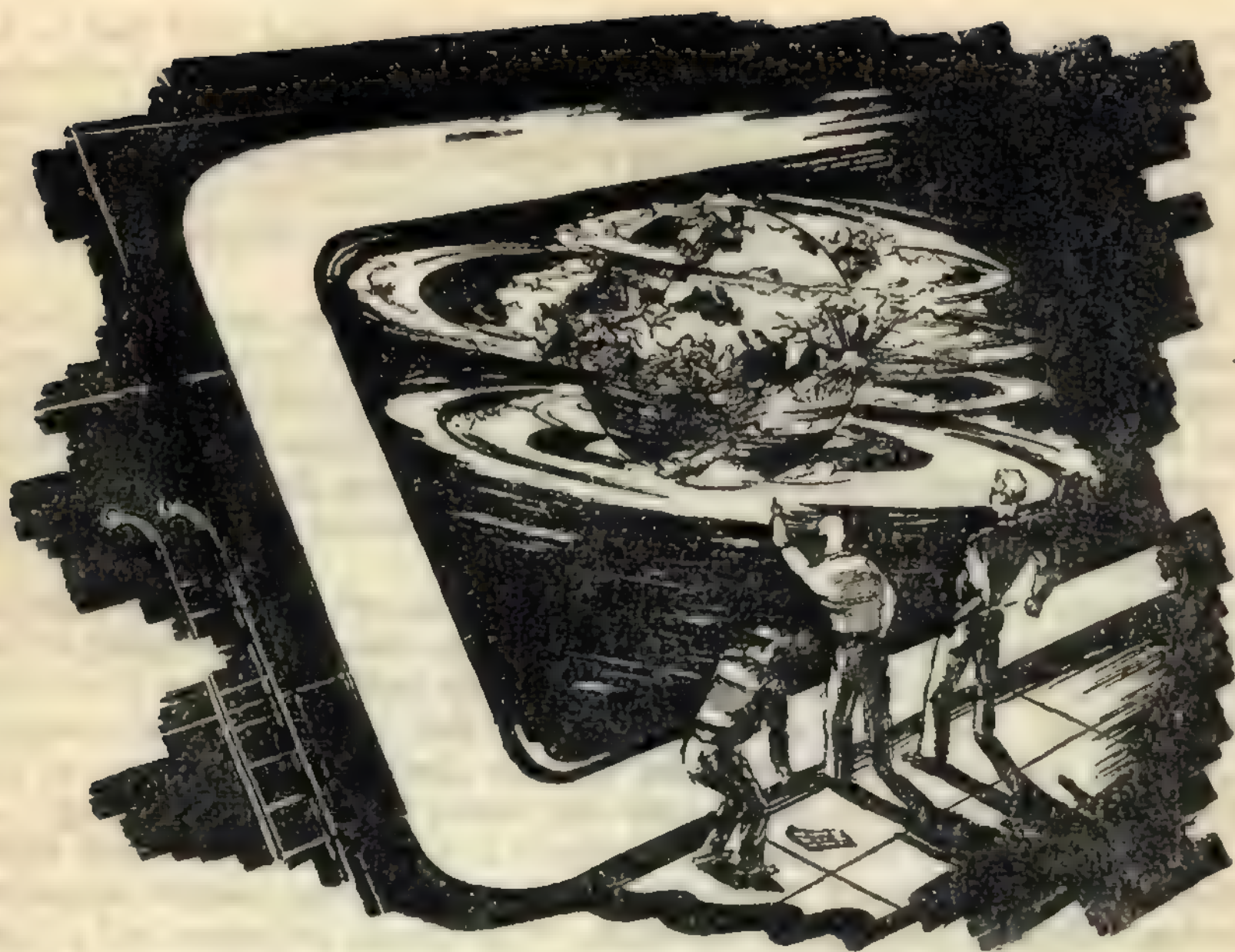
In the mild warmth of noon Bert let his boat carry him along. Behind him, a fan of ripples spread gently and then lapsed back into placidity. Still further back the immense silence closed in again, and nothing remained to show that he had passed that way. The scene had scarcely changed for several days and several hundred miles of his quietly chugging progress.

His boat was a queer craft. There was nothing else like it on Mars—nor any other place. For he had built it himself—and without knowing anything about the building of boats. There had been a kind of plan—well, a rough idea—in his head, at first, but he had had to modify that so many times that most of it had grown empirically from the plates and materials he had been able to find. The result had something of sampan, punt and rain-water tank in its ancestry, but it satisfied Bert.

He sprawled in comfortable indolence at the stern of his craft. One arm in a tattered sleeve hung over the tiller, the other lay across his chest. Long legs in patchwork trousers sprawled out to end in strange boots with canvas uppers and soles contrived of woven fibres; he had made those himself, too. The reddish beard on his thin face was trimmed to a point; above it his dark eyes looked ahead with little interest from under the torn, stained brim of a felt hat.

He listened to the phut-phutting of the old engine as he might to the purr of a friendly cat; indeed, he thought of it as an old friend, bestowing upon it a kindly care to which it responded with grunts of leisurely goodwill as it bore him along. There were times when he talked to it encouragingly or told it the things he thought; it was a habit he did not approve of and which he curbed when he noticed it, but quite often he did not notice. He felt an affection for the wheezy old thing, not only for carrying him along thousands of miles of water, but because it kept the silence at bay.

Bert disliked the silence which brooded over desert and water like a symptom of mortification, but he did not fear it. It did not drive him, as it did most, to live in the settlements where there was neighbourliness, noise and the illusion of hope. His restlessness was stronger than his dislike of the empty lands; it carried him along when the adventurous, finding no adventure, had turned back or given in to despair. He wanted little but, like a gipsy, to keep moving.



Bert Tasser he had been years ago, but it was so long since he had heard the surname that he had almost forgotten it: everybody else had. He was just Bert—for all he knew he was the only Bert.

"Ought to be showing up soon," he murmured, either to the patient engine or himself, and sat up in order to see better.

A slight change was beginning to show on the bank; a wood was becoming more frequent among the scrawny bushes, a slender-stalked growth with polished, metallic looking leaves, sensitive to the lightest breath of wind. He could see them shivering with little flashes in increasing numbers ahead, and he knew that if he were to stop the engine now he would hear not the dead envelope of silence, but the ringing clash of myriads of small hard leaves.

"Tinkerbells," he said. "Yes, it won't be far now."

From a locker beside him he pulled a much-worn, hand-drawn map, and consulted it, from it he referred to an equally well-used notebook, and read over the list of names written on one of the pages. He was still muttering them as he returned the papers to the locker and his attention to the way ahead. Half an hour passed before a dark object became visible to break the monotonous line of the bank.

"There it is now," he said, as if to encourage the engine over the last few miles.

THE building which had appeared oddly shaped even from a distance revealed itself as a ruin on closer approach. The base was square and decorated on the sides with formal patterns in what had once been high relief, but was now so smoothed that the finer details were lost. Once it

had supported some kind of tower; though exactly what kind had to be guessed, for no more than the first twenty feet of the upper structure remained. It, too, bore remnants of worn carving, and, like the base, was built of a dusky red rock. Standing a hundred yards or so back from the bank, it was deceptive in its isolation. The size and the degree of misadventure which time and adaptation had brought it only became appreciable as one approached more closely.

Bert held on his course until he was opposite before he turned his clumsy craft. Then he swung over and headed towards the bank at slow speed until he grounded gently on the shelving shore. He switched off the engine, and the indigenous sounds took charge; the tinny chime of the tinkerbells, a complaining creak from a ramshackle wheel turning slowly and unevenly a little to his left along the bank, and an intermittent thudding from the direction of the ruin.

Bert went forward to the cabin. It was snug enough to keep him warm in the cold nights, but ill lit, for glass was hard to come by. Groping in the dimness he found a bag of tools and an empty sack, and slung them over one shoulder. He waded ashore through the few inches of water, drove in a hook to hold his boat against the unlikely chance of disturbance in the placid water, and turned with a long easy stride towards the building.

To either side of the place and beyond it clustered a few small fields where neatly lined crops stood fresh and green among narrow irrigation ditches. Against one wall of the stone cube was an enclosure and a shed roughly built of irregular fragments which might have been part of the vanished tower. Despite its inexpert appearance it was neatly kept, and from beyond it came occasionally, the grunt of small animals. In the near face of the cube was a doorway, and to either side of it unsquare holes which, though glassless, appeared to be windows. Outside the door a woman was at work, pounding grain on a shallow worn rock with a kind of stone club which she held in both hands. Her skin was a reddish brown, her dark hair rolled high on her head, and her only garment a skirt of coarse russet cloth stencilled with a complex yellow pattern. She was middle aged, but there was no slackening of muscles or deterioration of poise. She looked up as Bert approached, and spoke in the local patois:

"Hullo, Earthman," she said, "we were expecting you, but you've been a long time."

Bert replied in the same language.

"Late am I, Annika? I never know the date, but it seemed about time I was this way again."

He dropped the bags, and instantly a dozen little bannikuks scampered to investigate them. Disappointed, they clustered round his feet mewling inquisitively, and turning their little marmoset-like faces up to him. He scattered a handful of nuts from his pocket for them, and sat down on a convenient stone. Recalling the list of names in the notebook he asked after the rest of the family.

THEY were well, it seemed. Yanff, her eldest son, was away, but Tannack, the younger, was here, so were the girls Guika and Zaylo; Guika's husband, too, and the children, and there was a new baby since he last came. Except for the baby they were all down in the far field: they would be back soon.

He looked where she pointed, and saw the dark dots moving in the distance among the neat rows.

"Your second crops are coming along nicely," he said.

"The Great Ones remember," she said in a matter of fact way.

He sat watching her as she worked. Her colouring and that of the setting made him think of pictures he had seen years ago—by Gauguin, was it?—though she was not the kind of woman that Gauguin had painted. Possibly he would not have seen beauty there, as Bert himself had failed to at first. Martians, with their lighter build and delicate bones had looked frail and skinny to him when he first saw them, but he had grown used to the difference: an Earth woman would look queer and dumpy now, he guessed—if he were ever to see one.

Aware of his gaze upon her Annika stopped pounding and turned to look at him; she did not smile but there was a kindness and understanding in her dark eyes.

"You're tired, Earthman," she said.

"I've been tired a long time," said Bert.

She nodded comprehendingly, and returned to her work.

Bert understood, and he knew that in her quiet way she understood. They were a gentle, sympathetic people, and sincere. It was a tragedy, one of a string of similar tragedies that the first Earthman to ground on Mars had seen them as a weak effete race; the 'natives', inferiors, to be kicked about, and exploited whenever convenient. It had stopped now; either they had got to know the Martian people better, as he had, or they lived in the settlements and seldom saw them; but he still felt ashamed for his own people when he thought of it.

After some minutes she said:

"How long is it you've been going round now?"

"About seven of your years: that's nearly fourteen of ours."

"That's a long time." She shook her head. "A long time to be roaming, all by yourself. But then you Earthmen aren't like us." She gazed at him again as though trying to see the difference beyond his eyes. "Yet not so very different," she added, and shook her head slowly again.

"I'm all right," Bert told her briefly. He pulled the conversation on to another course. "What have you got for me this time?" he asked, and sat half-listening while she told him of the pans that wanted mending, the new ones she was needing, how the wheel wasn't delivering as much water as usual; how Yanff had tried to rehang the door when it came off its hinges and what a poor job he had made of it. The other half of his attention went wandering—perhaps that was one of the things that happened when you were so much alone.

II

THE 'I'm all right' had been a buffer; he knew it, and he knew she knew it. None of the Earthmen was 'all right'. Some of them put up a show, others did not, but there was the same trouble underneath. A number wandered restlessly as he did; most of them preferred to rot slowly and alcoholically in the settlements. A few, grasping at shadows while they dreamed, had taken Martian girls and tried to go native. Bert felt sorry for them. He was used to seeing their faces light up and he knew their eagerness to talk when he met them; and always of reminiscences, nostalgic rememberings.

Bert had chosen the wandering life. The stagnation had shown its effect in the settlement quite soon, and it took no great power of perception to see what was going to happen there. He had spent a whole Martian year in building his boat, equipping her, making pots and pans for trade purposes, and stocking her with tools and supplies; and once he had set out upon a tinker's life restlessness kept him moving. The settlements saw little of him save when he called in for fuel for his engine or stayed awhile in the winter working on pans and other useful trade goods, and at the end of it he was glad to leave. Each time he called the deterioration seemed more noticeable, and a few more of those he had known had sought relief by drinking themselves to death.

But recently he had felt a change in himself. The restlessness still kept him from lingering longer than necessary in the settlements, but it did not drive him as it used to, nor was there the old satisfaction in the rounds and journeys that he planned for himself. He felt no temptation to join the men in the settlements, but he had begun to understand the gregariousness which held them there, and to understand, too, why they found it necessary to drink so much. It made him uneasy at times to realise that he had changed enough to be able to sympathise with them.

Mostly it was age, he supposed. He had been barely twenty-one when he had completed his first and last rocket flight; most of the others had been ten, fifteen, twenty years older: he was catching up now with the feelings they had had years ago, aimlessness, hopelessness and a longing for things that had vanished for ever.

EXACTLY what had taken place on Earth, none of them knew, nor ever would know. His ship had been four days out of the Lunar Station, bound for Mars, when it happened. One of his mates, a man a little older than himself had roused him from his bunk and dragged him to the porthole. Together they had gazed at a sight which was printed for ever on his memory: the Earth split open, with white-hot fire pouring from the widening cracks.

Some had said that one of the atomic piles must have gone over the critical mass and touched off a chain reaction; others objected that if that were so the Earth would not have split, but have flared something like a nebula followed by non-existence. Much ill-informed argument regarding the possibility of a chain reaction limited to certain elements had followed, and occasionally recurred. The truth was that nobody knew. All that was certain was that it had broken up, disintegrating into a belt of innumerable asteroids which continued to scurry round the sun like a shower of cosmic pebbles.

Some of the men had taken a long time to believe what they had actually seen; they were the worst affected when they did understand. Some found that their minds would not grasp and hold it as a fact; for them the Earth went on, ever unattainable, yet somewhere existent. Demoralisation had spread through the ship, a few were for turning back, unreasonably convinced that they should be there, and in some way giving help: afterwards it had continually been their grudge that they had not been allowed to, even if it were useless. The skipper had decided that there was nothing to be done but hold on their course for Mars.

The navigators had looked more and more worried as their tables became

increasingly inaccurate with orbits changing about them; they had watched with wonder the freed moon leave her path and sail through space guided by incalculable forces until she came eventually within the clutch of the giant Jupiter; but long before that happened the ship had, by a combination of calculation and guesswork, made her successful last drop to Mars.

Other ships, too, had come in; research vessels from the Asteroid Belt and beyond, traders from the Jovian moons diverted from the homeward course. Some that were expected never arrived, but in the end there were a couple of dozen lying idle on Mars with no home port to seek. Several hundreds of men idled with them. As well as crews, there were miners, drillers, refiners, prospectors, explorers, station maintenance men, settlement staff and the rest, all thrown together on an alien world to make the best of it.

There had also been two women, hostesses or stewardesses. Good enough girls, and aimiable at first, though no great beauties. But circumstances were against them, and the pressure was great. They had gone quickly to the astonishing depths of badness good women can reach once they start. It was reckoned they had caused a score of murders each before they were found to be susceptible to the same method of disposal. Things were quieter after that; with drinking as the main amusement.

It might, Bert, told himself, have been worse. It *was* worse for those who had had wives and families. He had less personal loss: his mother had died some years before, his father had been an old man, there had been a girl, a sweetly pretty girl with hair like red gold and who grew prettier in his memory as time went by: Elsa her name was, but there had not really been a lot to it; and though it was pleasant to recall that she might have married him, he had never in point of fact seriously tried to find out whether she would or would not. Then, too, there was a slender consolation that he was on Mars and at least better off than those who must have been trapped in the steamy heat of Venus, or on the cold Jovian moons. Life offered something beyond perpetual battle to survive, and though it might not be very much, it had been better to go out and see what there was rather than soak away youth and strength with the rest. So he had started to build his boat.

BERT still thought that the best and wisest thing he had ever done. The work had kept him too busy to mope, and then when he had set off it had been as an explorer, a pioneer along many of the thousands of miles of canals that he travelled. There had been the business of getting to know the Martians, and of finding them quite unlike what he had been told. That had involved learning languages completely different in structure from his own, and the local variations of them, and he had kept at it until he spoke four patois better than any other Earthman he knew, and could get along comfortably in several more. He found that he usually thought in one of them nowadays. Along canals which were sometimes like calm seas sixty or eighty miles wide, and sometimes less than a single mile he chugged slowly from one cultivated site to another. The more he saw of the huge waterways and their multiplicity, the greater had grown his first amazement at them; nor after years of travelling them was he nearer an understanding of how they had been built than when he first set out. The Martians could tell him nothing when he asked: it was something which had been done by the Great Ones long, long ago. He came to accept the canals with the rest and was grateful to the

Great Ones, whoever they might have been, for providing the smooth lanes all over their planet.

He grew fond of the Martian people. Their quietness, their lack of hurry and their calm, philosophic ways were a soothing antidote to his sense of drive and thrust. He found out quite soon that what his companions had called their laziness and effeteness was a misunderstanding of minds that worked differently in some ways, and certainly saw life differently; whose conception of the virtues was altogether alien, and he found out how his abilities could help their deficiencies in exchange for the foods they knew how to grow.

Thus he had wandered back and forth mending and making in exchange for his keep, never staying long anywhere. It had only been recently that he had gradually become aware that the restlessness which still possessed him was no longer to be assuaged by wandering alone—if by wandering at all.

BERT had not noticed that Annika had ceased to talk when his thoughts went astray. He had no idea how much time passed before she ceased pounding to look up and say:

“They’re coming now.”

The two men came first, heads down and deep in conversation. They were lightly, almost weakly, built, to Earth judgment, but Bert had long ceased to apply alien standards; he saw them as well set up and capable. The women followed. Guika was carrying the smallest of three children while the others held on to the hands of her sister who laughed down at down at them. Guika was now, he thought, about twenty-five by Earth reckoning, her sister Zaylo about four years younger. Like their mother they wore roughly woven bright patterned skirts and their hair was held in its high dressing by silver pins; like her, too, they were smoothly rhythmic in their movements. He scarcely recognised Zaylo at first; she had not been at home on his last two visits and there was change enough for him to be uncertain.

Tannack, the son, saw him and came hurring forward. His greeting was glad and kindly. The others came up and surrounded him as they always did, looking rather as if they were reassuring their memories about the appearance of an Earthman.

Annika gathered up her flour, and disappeared into the stone pediment of the tower which was their home. The rest of them followed chattering and laughing with Bert, plainly pleased to see him again.

During the meal Tannack told him all over again of all the things that had worn out, got broken, and gone wrong. They didn’t sound very serious, nothing that the ordinarily handy man could not soon have put right, yet that was one of the directions where his value lay; a fault and its remedy which took him five minutes to perceive and could cost them as many weeks of careful cogitation and then, as likely as not, they would fail in its application. The utterly unmechanical quality in them astonished him yet. It was something they had never developed beyond absolute necessity. He had wondered if it and the passiveness which was also so different a characteristic from the nature of the Earthmen might be due to their never having been the dominant race on the planet until there was little left to dominate.

The mysterious Great Ones who had built the canals, the now fallen buildings and cities, and who had in some way vanished centuries, or perhaps thousands of years ago, had been the rulers: it seemed as if under them the idea of warring and fighting had had no chance to develop, and the mechanical sense no need. If so, it was a tradition planted firmly enough never to be lost. At times he felt that there was a lingering sub-conscious sense of taboo about such things. They still looked for their blessings to the Great Ones who 'remembered'. Bert would have very much like to know what those Great Ones were and even how they had looked, but no one could tell him.

AFTER they had eaten he went outside to build himself a little fire and lay out his tools. They brought him pans, hoes and other things to mend, and then disappeared about various jobs. The three children stayed to watch, sitting on the ground playing with the scampering little bannikuks, and chattering to him as he worked. They wanted to know why he was different from Tannack and the others, why he wore a jacket and trousers, what use his beard was. Bert began to tell them about Earth; about great forests and soft green hills, of the huge clouds which floated in summer in skies that were bright blue, of great green waves with white tops, of mountain streams, of countries where there were no deserts, and flowers grew wild everywhere in the Spring, of old towns and little villages. They did not understand most of what he said, and perhaps they believed less, but they went on listening and he went on talking, forgetting they were there until Annika interrupted to send them off to their mother. She sat down near him when they had gone.

The sun would soon be down, and he could feel the chill already in the thin air. She seemed not to notice it.

"It is not good to be lonely, Earthman," she said. "For a time, when one is young and there is much to see, it seems so, though it is better shared. Later it is not good."

Bert grunted. He did not look up from the iron pot he was mending.

"It suits me to be on my own. I ought to know," he told her.

She sat looking far away; beyond the twinkling tinkerbells, and beyond the smooth water behind them.

"When Guika and Zaylo were children you used to tell them tales of the Earth—but they weren't the tales you were telling just now. In those days you talked about huge cities where millions of your people lived, of great ships that were like lighted castles by night, of machines travelling on the ground at unbelievable speeds and others that flew above, even faster; of voices that could speak through the air to the whole Earth, and many other marvellous things. And sometimes you sang queer, jerky Earth songs to make them laugh. You did not talk of any of those things to-night."

"There are plenty of things to talk about. I don't need to go on telling of the same things each time," he said. "Why should I?"

"What you should say matters less than what you do say, but why you say it matters more than either," she murmured.

Bert blew on his glowing little fire and turned the iron in it. He made no reply.

"Yesterday was never the future. One cannot live backwards," she told him.

TIME TO REST

"Future! What future has Mars? It is senile, dying. One just waits with it for death," he said, with impatience.

"Was not Earth, too, beginning to die from the moment it started to cool?" she asked. "Yet it was worth building upon, worth raising civilisations there, wasn't it?"

"Well—was it?" he inquired bitterly. "For what?"

"If it were not, it would be better if we had never been."

"Well?" he said again, challengingly.

She turned to look at him.

"You don't think that—not really."

"What else am I to think?" he asked.

The light was growing poor. He covered the fire with a stone and began to pack up his tools. Anika said:

"Why don't you stay here with us, Earthman? It's time for you to rest."

He looked up at her in astonishment, and started to shake his head automatically, without consideration. He had planted it in his mind that he was a wanderer, and he had no wish to examine the strength of the setting. But Annika went on:

"You could help a lot here," she said. "You find things easy that are difficult for us. You are strong—with the strength of two of our men." She looked beyond the ruin at the neat small fields. "This is a good place. With your help it could be better. There could be more fields and more stock. You like us, don't you?"

He sat looking into the twilight, so still that an inquisitive bannikuk climbed up to explore his pocket. He brushed the little creature away.

"Yes", he said, "I've always liked coming here, but——"

"But what, Earthman?"

"That's just it—'Earthman'. I don't belong here with you. I don't belong anywhere. So I just keep visiting, and moving on."

"You could belong here—if you would. If Earth were re-created now, it would be stranger to you than Mars."

That he could not believe. He shook his head.

"You feel it would be disloyal to think that—but I fancy it is true, nevertheless," Annika said.

"It can't be." He shook his head again. "Anyway, what does it matter?"

"It matters this much," Annika told him, "that you are on the verge of finding out that life is not something which can be stopped just because you don't like it. You are not apart from life: you are a part of it."

"What has all that to do with it?" Bert asked.

"Just that mere existence is not enough. One exists by barter. One lives by giving—and taking."

"I see," said Bert, but doubtfully.

"I don't think you do—yet. But it would be better for you to, and better for us if you were to stay. And there is Zaylo."

"Zaylo?" Bert repeated, wonderingly.

III

ZAYLO came to the bank while he was repairing the wheel the next morning. She settled down a few feet away on the slope, and sat with her chin on her knees watching. He looked up and their eyes met. Something

entirely unexpected happened to Bert. Yesterday he had seen her as a child grown up, today it was different. There was a pain in his chest and a hammering, the skin on his temples felt oddly tight, his hand trembled so that he almost dropped the bar he was holding. He leant back against the wheel, staring at her but unable to speak. A long time seemed to pass before he could say anything, and the words sounded clumsy in his own ears.

What they talked about he could never afterwards remember. He could only recall the sight of her. Her expression, the depth of her dark eyes, the gentle movements of her mouth, the way the sun shone on her skin as though there were a mist over polished copper, the lovely line of her breasts, the slim feet in the sand beneath the brightly patterned skirt. There were a host of things he had never noticed before; the modelling of her ears, the way her hair grew, and the ingenuity of coils which could be held firmly on top of her head by the three silver pins, the slenderness of her hands and fingers, the pearly translucence of her teeth, and on through a catalogue of wonders hitherto incredibly unobserved.

It was a day of which Bert recalled very little else but that there seemed to be sections of him being torn slowly and painfully apart, yet still so close that sometimes he looked out from one section, and sometimes from the other. He would see himself in his boat, sliding along the endless canals in the sunlight with vastnesses of desert stretching out on either side, sitting out the sudden duststorms in his small cabin where the throat-drying sand managed still to penetrate every ingenuity, and then going on as usual to do tinker's work at the next inhabited area. That was the life he had got used to, and life he had chosen—he could go on with it as before and forget Zaylo—yet he knew it would not be quite as before because it was not going to be easy to forget her. There were pictures which he would not be able to leave behind; Zaylo smiling as she played with her sister's babies, Zaylo walking, sitting, standing; Zaylo herself. There were dreams rising inadvertant and beneath his guard, imaginings which swam into his mind in spite of his intention to keep them out; the warmth of Zaylo lying beside him, the light weight of her on his arm, the firmness, the lovely colour of her, the relaxation there would be in having a place to lay one's heart, and a hand to cherish it. It all hurt like a hardened dressing drawing from a wound.

AFTER the evening meal he went away from the rest, and hid himself in his boat. Looking across the table at her it had seemed to him that she saw all that was going on inside him, and knew more about it than he did himself. She made no gesture, no sign, but she was aware of everything with a calmness somehow alarming. He did not know whether he hoped or feared that she might follow him to the boat—but she did not come.

The sun set while he sat, unconscious that he had begun to shiver with the chill of the Martian night. After a time he moved stiffly, and roused himself. He paddled through the few inches of water and climbed the bank. Phobos was shedding a dim light across the fields and the arid land beyond. The ruined tower was a misshapen black shadow.

Bert stood looking out into the great darkness where his home had been. Mars was a trap to hold him alive, but he would not let it pet and tame him. He was not to be wheedled by softness from the harsh grudge he owed providence. His allegiance was to Earth, the things of Earth, the memory of

Earth. It would have been better to have died when the mountains and oceans of Earth were burst open; to have become one more mote among the millions memorially circling in the dark. Existence now was not life to be lived; it was a token of protest against the ways of fate.

He peered long into the sky hoping to see one of the asteroids which once was some corner of the loved, maternal Earth: perhaps, among the myriad points that shone, he did.

A wave of desolation swept through him; a hungry abyss of loneliness opened inside him. Bert raised his clenched fists high above his head. He shook them at the uncaring stars, and cursed them while the tears ran down his cheeks.

AS the far off chugging of the engine faded slowly into silence there was only the clinking of the tinkerbells to disturb the night. Zaylo looked at her mother with misty eyes.

"He has gone," she whispered, forlornly.

Annika took her hand, and pressed it comfortingly:

"He is strong, but strength comes from life—he cannot be stronger than life. He will be back soon—quite soon, I think." She put up her hand and stroked her daughter's hair. After a pause she added: "When he comes, my Zaylo, be gentle with him. These Earthmen have big bodies, but inside them there are lost children."

THE END

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POOL OF INFINITY

By W. MOORE

Just a couple of kids blowing bubbles in the garden . . .

A THOUGHT impulse passed from Isosceles to Equilateral. "I've thought of a lovely new game," it said. "Will you come and play?"

Equilateral was an agreeable little chap.

"All right," he answered. "But let's go out into the garden quickly before mean old Scalene sees us, or he'll want to play too. You know he always spoils everything."

"You go on, Equi," said his brother. "I'll follow you in a minute."

Little Equilateral ran into the garden and bounced his ball against the fence until Isosceles came out of the house. Then he stopped playing, and peered curiously at the ovoid vessel his brother carried. He caught his breath in a half sob, and his eyes rolled.

"You'd better put it back, quickly," he quavered. "Don't you remember what Daddy said he'd do if we touched the new mixture he's invented?"

"Oh, don't be such a baby, Equi! We won't do any harm. I've only taken a little. And Dad went out to his Club, so he'll never find out. Come on, be a sport! I've made up a grand game with it!"

Equi wavered. "We-e-ell-" he began doubtfully.

"Just have a look inside," Isos urged, lifting the lid of the container.

Equi gazed with wide eyes at the seething mass which all but filled the jar. Pretty, the way it flashed and shimmered; it delighted him, though his supremely refined conceptions could never be aware of the substance of it. The stuff, neither liquid nor wholly gaseous, swirled and blazed in a searing agglomeration of incandescent heat; but Isos and Equi saw only the glitter of a tinsel-covered Christmas tree.

"What are we going to do with it?" Equi wanted to know. His brother put the jar under his arm, drew two long straws from beneath his robe.

"Come on, I'll show you. We'll go down to the space-pool." He ran out of the garden, Equi followed as fast as his chubby round legs would let him. They capered down the road until they came to the pool.

"I don't like this place," said Equi tremulously. "It looks so dark an' creepy down there."

"Yes, it does," Isos conceded. "I used to be frightened of it when I was little. But just wait till you see what I'm going to do!"

"Why? How?" Equi demanded eagerly.

"It's what I've invented! We each have a straw, and we dip it in the jar and blow out, and see who makes the prettiest pattern," Isos explained.

"Oh, goody!" Little Equi reached excitedly for the straw his brother offered. "Do let me have the first dip!"

He bent, plunged his straw into the brilliancy that filled the vessel, and straightened up. His cheek bulged suddenly, and he blew the glittering drop from the end of the straw. It flew out in a ball, floated over the space-pool shimmering as it whirled.

Equi laughed in childish glee. "See my lovely bubble," he chanted.

"Wait till you see mine!" Isos boasted. He thrust his reed into the vessel,

and putting it to his lips, ejected a stream of blinding incandescence far out on the pool.

"There!" he said proudly. "See! It's broken up into little pieces."

Equi did not bother to look. He was too busy dipping his straw. He blew again. A second shining globe floated away. The first bubble still whirled travelling gently across the surface of the pool. The new globe, moving more quickly, grazed its edge. The first bubble split into small, glowing spheres of multi-coloured splendour.

"See mine! See mine!" shrieked the delighted Equi. "It broke into ten pieces. Look at the big one with the little ones whirling round it! An' lots more tiny ones, too."

Isos watched the little boy's antics with an indulgent eye. Then he picked up the ovoid jar, and dipping in his hand, began to sprinkle its contents over the surface of the pool, until its gloom was lightened with thousands upon thousands of glittering pin-points. Equi, shouting with excited laughter, helped him, until at last there were but a few drops of the golden fire at the bottom of the jar. Isos drew the vessel back with both hands, and jerking it quickly forward, shot forth a last long coruscating stream of light.

He looked at the empty jar.

"We'd better take this back now," he remarked, swinging it carelessly by one of its chased handles.

"I don't want to go home yet," Equi pouted. "Let's hide it in the hollow tree and play in the fields."

"All right," Isos agreed. He thrust the jar into the hole, and they ran off through the woods.

OUT in the space-pool, the tiny globes shimmered and floated. Presently the white heat died out of those which were smaller, so that they shone only by the reflected light of those that were larger. Some cooled more quickly than others. As the afternoon wore on, a certain tiny sphere, one of the ten which had sprung from the disruption of Equi's first bubble, began to change. Neither of the boys would have noticed any change, for to them the globe itself was but the size of a gooseberry.

The tiny orb continued to whirl round the largest of the group; it spun also of itself. After an hour it was cool. With the cooling came a hardening of the surface, then moisture, turning to water. Out of the water there presently crawled strange life forms. While Isos and Equi ran about their fields, horrid reptiles, fearful beasts, nightmare birds were evolved, and roamed the surface of the speck of matter. Last of all came Man.

Now Man was intelligent; not, indeed, in the same plane with Isos and Equi. To them, Man, had they known of his existence, would have been an amocba. Yet Man's intellect far surpassed that of the dinosaurs, the birds and beasts he learned to name, which had lived in what he, in his ignorance, called the pre-historic ages.

As the shadows lengthened, Man made himself lord of the puny globe. He built ships to ride the water; he amassed the Pyramids as a monument to his own mortality. Roman legions shook the ground with thunderous tread. The Aztecs rose, flourished, died. The British Empire, America, grew. . .

Man learned to get the best out of such intellect as he had. He watched

(continued on page 96)

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the other little blots floating on the space-pool. That one which gave him light and heat, he called the Sun; his neighbours were the planets; the last fiery stream flung out by Isos was known to Man as the Galaxy. Man built machines for observing the other bubbles. Later, he began to make ships that would fly to them. Most had long cooled, were useless to the warm-blooded microbe that was Man. But there were other specks, infinitely far out in the space-pool, whose secrets Man could never uncover.

ISOS and Equi grew tired of playing.

"Must be about teatime," said Isos at last. "We'd better be going home."

Equi's legs were tired. "All right," he sighed. "We mustn't forget the jar."

They came slowly through the woods to the edge of the pool. Isos slid his hand into the hollow tree and drew out the jar. Equi was staring at the surface of the pool.

"Look, Isos!" he cried, faintly excited. "A few of 'em are still shining. And see! There are the ten bubbles I blew first of all. The big one's as bright as ever, but the others have gone awfully dim, haven't they?"

"Oh, come on, Equi!" said Isos crossly. "Never mind those old things. They'll be all gone tomorrow, an' we can make some more."

They turned from the pool and began to run towards their home.

THE END

BOOK REVIEW

The Four Sided Triangle by William F. Temple — John Long 9s. 6d.

IT IS a refreshing change to read author Temple's work between hard covers instead of digging his caustic wit and humour from the pages of magazines.

The theme of this story is novel. Taking the usual three-cornered triangle of human interest—two men in love with the same girl—author Temple has his two men, who are experimental scientists, develop a machine which copies faithfully from the atoms of the original subject. They establish a factory which produces "copy-originals" of almost every rare piece of art available, until the girl marries one of the scientists. Then they take the final step in the chain and create a copy-original of the girl, Lena.

Dorothy, the copy, comes to life in the machine with all the memory patterns of her human double. She marries Bill, who had been unsuccessfully in love with Lena, and for a while the four strangely mixed people live almost normal lives.

Soon the drama heightens. Dorothy was also "born" with Lena's love for her husband Rob, despite the fact that she had married Bill. It becomes even more complicated when Bill is killed in an explosion at the factory, all the notes and data on the matter-integrator being destroyed. At first the remaining three corners of the four-sided triangle plan to duplicate Rob, thus giving Dorothy the man she wants, but without Bill's guiding hand to build a new machine, the plan is foredoomed. Lena and Dorothy then both agree to share Rob, but he refuses.

Both girls attempt to commit suicide at the same time. One survives—one dies. But which? It would be unfair to the latter to divulge the last mystery in such a well-written novel.

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